A-50(B) 758

PROCEEDINGS OF THE CHIEF CONSERVATOR OF FORESTS
No. 294. PRESS, DATED 22ND JULY 1931

WORKING PLAN

FOR THE

THADAGAM VALLEY AND BOLAMPATTY BLOCK III FORESTS

OF THE

PALGHAT FOREST DIVISION

MADRAS PRESIDENCY

DRAWN UP BY
M.R.RY. M. H. KRISHNASWAMY AYYAR AVARGAL,
Extra Assistant Conservator of Forests, Ootacamund.

1930 TO 1939

SCANNED

C

JB 2129L N3O45
N31
95504

MADRAS
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS
1931

PROCEEDINGS OF THE CHIEF CONSERVATOR OF FORESTS
No. 294, PRESS, DATED 22ND JULY 1931

WORKING PLAN

FOR THE

THADAGAM VALLEY AND BOLAMPATTY BLOCK III FORESTS

OF THE

PALGHAT FOREST DIVISION

MADRAS PRESIDENCY

DRAWN UP BY

M.R.Ry. M. H. KRISHNASWAMY AYYAR Avargal,
Extra Assistant Conservator of Forests, Ootacamund.

1930 TO 1939

INTRODUCTION.

The working plan prepared by Mr. Habibullah Sahib for the Thadagam reserve was sanctioned by the Board of Revenue in their Proceedings No. 32, dated 7th March 1917. Under this plan fellings were prescribed over a period of thirty years —rather a long period. Many of the prescriptions contained in the plan underwent changes on account of sylvicultural or economic considerations. Moreover part of the Thadagam reserve was transferred to the North Coimbatore division after the preparation of the Working Plan. Under the circumstances it was found necessary to revise the Thadagam plan.

At the same time there are three reserves contiguous with Thadagam reserve but not brought under any Working Plan. It was decided to bring these three reserves also under this plan.

The field work for this plan was commenced on 13th September 1929 and the final draft of the plan was completed on 10th December 1929.

Thanks are due to Mr. E. B. Ramachandra Rao, District Forest Officer, for his valuable suggestions in the get up of this plan.

PALGHAT,
10*th December* 1929.

M. H. KRISHNASWAMI,
Extra Assistant Conservator of Forests.

R.D. Richmond Esq., I.F.S.,

Chief Conservator of Forests.

SUBJECT:- Working Plan - Thadagam Valley and Bolampatty Block III Forests - Palghat Division - amendment - issued.

Reference:-Letter No.A.1234/31 dated 13th December 1931, from the Conservator III (Working Plans) Circle, Ootacamund

REFERENCE:-

The following amendment will be issued to the -- Working Plan for the Thadagam Valley and Bolampatty Block III Forests of the Palghat Division sanctioned in C.C.P.294 F., dated 22-7-1931:--

For the existing Table of contents, substitute the following:--

TABLE OF CONTENTS.

PART I.

Summary of facts on which the proposals are based.

CHAPTER I -- THE TRACT DEALT WITH.

Sections.		Pages.
1.	Name and situation ...	1
2.	Configuration of the ground ...	1
3.	Geology, rock and soil ...	1
4.	Climate ...	1
5.	Water supply ...	1
6.	Distribution and area. ...	2
7.	State of the boundaries. ...	2
8.	Legal position ...	2
9.	Rights and concessions ...	3

CHAPTER II - THE FOREST.

1.	Composition and condition of the crop.	3
2.	Injuries to which the crop is liable.-	
	(i) Fire ...	4
	(ii) Grazing ...	4
	(iii) Man ...	5
	(iv) Wild animals ...	5
	(v) Noxious plants, etc..	5

CHAPTER III - UTILIZATION OF THE PRODUCE.

1.	Agricultural customs and wants of the population	5
2.	Markets and marketable products. ...	6
3.	Lines of export. ...	6
4.	Methods of exploitation and their cost.	6
5.	Past and current prices. ...	6

Part I.

Summary of facts on which the proposals are based.

CHAPTER IV - STAFF AND LABOUR SUPPLY.

Sections.		Pages.
1.	Staff ...	7
2.	Labour ...	7

CHAPTER V - PAST SYSTEMS OF MANAGEMENT.

1.	General history of the forest. ...	7
2.	Past systems of management and their results.	8
3.	Special works of improvement undertaken.	8
4.	Past yields. ...	9
5.	Past revenue and expenditure. ...	10

CHAPTER VI - STATISTICS OF GROWTH AND YIELD.

* * * * * * 10

CHAPTER VII - ESTIMATE OF THE CAPITAL VALUE OF THE FOREST.

* * * * * * 10

PART II.

Future management discussed and prescribed.

CHAPTER I - BASIS OF PROPOSALS.

Sections.		
1.	General objects of management. ...	11
2.	Methods of treatment to be adopted..	11
3.	Working circles, their area and distribution, reasons for their constitution ...	11
4.	The period of working plan and the necessity for intermediate revision. ...	11

CHAPTER II-WORKING PLAN FOR THE COPPICE WORKING CIRCLE.

1.	General constitution of the Working Circle and character of the vegetation. ...	12
2.	Blocks and compartments. ...	13
3.	Analysis and valuation of the crop..	13
4.	Methods of treatment ...	13
	(i) System ...	13
	(ii) Rotation ...	13
	(iii) Yield. ...	13
5.	Method of executing the fellings ...	13
6.	Tabular statement of fellings and subsidiary operations. ...	14
7.	Subsidiary sylvicultural regulations. Cleaning	14
8.	Control-	
	(i) Control book ...	15
	(ii) Record of works. ...	15
	(iii) Control journal. ...	15
	(iv) Indicator area. ...	15

Sections. Pages.

CHAPTER III-WORKING PLAN FOR THE PROTECTION WORKING CIRCLE.

1. General ... 15
2. Blocks and compartments ... 15
3. Method of treatment ... 15

CHAPTER IV - WORKING PLAN FOR THE BAMBOO WORKING CIRCLE. ... 15

CHAPTER V - WORKING PLAN FOR THE MINOR PRODUCE WORKING CIRCLE ... 16

CHAPTER VI-WORKING PLAN FOR THE GRAZING WORKING CIRCLE. ... 16

CHAPTER VII.-MISCELLANEOUS REGULATIONS.

1. Fire protection ... 17
2. Roads. ... 17
3. Improvement of water-supply ... 18
4. Buildings. ... 18
5. Maintenance of boundaries. ... 18
6. Sandal propogation centres. ... 18

CHAPTER VIII.-ESTABLISHMENT AND LABOUR ... 19

CHAPTER IX.-FINANCIAL FORECAST AND COST OF THE PLAN.

1. Financial forecast. ... 19
2. Cost of the plan ... 20

CHAPTER X.-SUMMARY OF PRESCRIPTIONS. 20

APPENDICES.

Appendix I.--Rights and concessions ... 22
Appendix II.-List of important species occurring in the working plan area.... 24

Appendix III.--Control forms--
(1) Control book for the coppice working circle. 25
(2) Record of works for the coppice working circle 25
(3) Control book for the bamboo working circle. 25
(4) Control book for the minor produce working circle 26
(5) Control book for the grazing working circle. 26

Appendix IV.--Working Plan map.

[signature] 19.1.32

for Chief Conservator.

To

The Conservators of Forests,
" District Forest Officers
" Principal, Forest College.

[initials] 19.1.32

Encs:-Nil.

DKS/19.i.'32.

TABLE OF CONTENTS

PART I.

Summary of facts on which the proposals are based.

CHAPTER I—THE TRACT DEALT WITH.

SECTIONS. PAGES

1. Name and situation ... ...
2. Configuration of the ground ... ...
3. Geology, rock and soil ... ...
4. Climate ... ...
5. Water supply ... ...
6. Distribution and area ... ...
7. State of the boundaries ... ...
8. Legal position ... ...
9. Rights and concessions ... ...

CHAPTER II—THE FOREST.

1. Composition and condition of the crop ... ...
2. Injuries to which the crop is liable—
   (i) Fire ... ...
   (ii) Grazing ... ...
   (iii) Man ... ...
   (iv) Wild animals ... ...
   (v) Noxious plants, etc ... ...

CHAPTER III—UTILIZATION OF THE PRODUCE.

1. Agricultural customs and wants of the population ... ...
2. Markets and marketable products ... ...
3. Lines of export ... ...
4. Methods of exploitation and their cost ... ...
5. Past and current prices ... ...

CHAPTER IV—STAFF AND LABOUR SUPPLY.

1. Staff ... ...
2. Labour ... ...

CHAPTER V—PAST SYSTEMS OF MANAGEMENT.

1. General history of the forest ... ...
2. Past systems of management and their results ... ...
3. Special works of improvement undertaken ... ...
4. Past yields ... ...
5. Past revenue and expenditure ... ...

CHAPTER VI—STATISTICS OF GROWTH AND YIELD.

* * * * * *

CHAPTER VII—ESTIMATE OF THE CAPITAL VALUE OF THE FOREST.

* * * * * *

PART II.

Future management discussed and prescribed.

CHAPTER I—BASIS OF PROPOSALS.

SECTIONS.

1. General objects of management ... ...
2. Methods of treatment to be adopted ... ...
3. Working circles, their area and distribution, reasons for their constitution ... ...
4. The period of working plan and the necessity for intermediate revision ...

PAGES

SECTIONS.

CHAPTER II—WORKING PLAN FOR THE COPPICE WORKING CIRCLE.

1. General constitution of the working circle and character of the vegetation ... ...
2. Blocks and compartments ... ...
3. Analysis and valuation of the crop ... ...
4. Methods of treatment ... ...
   (1) System ... ...
   (2) Rotation ... ...
   (3) Yield ... ...
5. Method of executing the fellings ... ...
6. Tabular statement of fellings and subsidiary operations ... ...
7. Subsidiary sylvicultural regulations. Cleaning ... ...
8. Control—
   (i) Control book ... ...
   (ii) Record of works ... ...
   (iii) Control journal ... ...
   (iv) Indicator area ... ...

CHAPTER III—WORKING PLAN FOR THE PROTECTION WORKING CIRCLE.

1. General ... ...
2. Blocks and compartments ... ...
3. Method of treatment ... ...

CHAPTER IV—WORKING PLAN FOR THE BAMBOO WORKING CIRCLE.

CHAPTER V—WORKING PLAN FOR THE MINOR PRODUCE WORKING CIRCLE.

CHAPTER VI—WORKING PLAN FOR THE GRAZING WORKING CIRCLE.

CHAPTER VII.—MISCELLANEOUS REGULATIONS.

1. Fire protection ... ...
2. Roads ... ...
3. Improvement of water-supply ... ...
4. Buildings ... .
5. Maintenance of boundaries ... ...
6. Sandal propagation centres ... ...

CHAPTER VIII.—ESTABLISHMENT AND LABOUR.

CHAPTER IX.—FINANCIAL FORECAST AND COST OF THE PLAN.

1. Financial forecast ... ...
2. Cost of the plan ... ...

CHAPTER X.—SUMMARY OF PRESCRIPTIONS.

APPENDICES.

APPENDIX I.—Rights and concessions ... ...

APPENDIX II.—List of important species occurring in the working plan area.

APPENDIX III.—*Control forms*—
   (1) Control book for the coppice working circle ... ...
   (2) Record of works for the coppice working circle... ... ...
   (3) Control book for the bamboo working circle ... ...
   (4) Control book for the minor produce working circle ... ...
   (5) Control book for the grazing working circle ... ...

APPENDIX IV.—Working Plan map.

PART I.

Summary of facts on which the proposals are based.

CHAPTER I.—THE TRACT DEALT WITH.

SECTION 1—NAME AND SITUATION.

The tract dealt with comprises that portion of Thadagam Block IV reserve with its additions and the portion of Anaikatty North reserve included in the Palghat division, and the whole of Anaikatty South and Bolampatty Block III reserves—all included in the Bolampatty forest range.

2. The area covered by this plan lies between longitudes 76° 45′ and 76° 55′ east, and latitudes 11° 1′ and 11° 8′ north, and situated at distances varying from eight to sixteen miles from Coimbatore.

3. The forests dealt with form one continuous block, roughly in the form of a horse shoe, opening towards the east.

4. The area covered by this plan is included in the Coimbatore Revenue district, and is in the Palghat Forest division, bounded on the north by the remaining portions of Anaikatty North and Thadagam reserves now in North Coimbatore Forest division, on the east and south by cultivated lands, and on the west by the Attapady Valley forests and Bolampatty Block II.

SECTION 2.—CONFIGURATION OF THE GROUND.

5. The elevation varies from 1,713 feet at the foot of the Thadagam reserve near Pannimadai, the lowest point in the tract dealt with, to 5,385 feet on the top of Perumalmudi, a place of worship by the villagers of the plains. On the north and south the hill rises rather sharply, eventually terminating in the continuous ridge dividing the Mettupalayam and Bolampatty ranges, the common boundary between Bolampatty Block III and Thadagam reserves. But towards the west, the ascent is gentle up to an elevation of 2,300 feet, beyond which the country consists of low hills—plateau like—broken by fairly deep nalas. The highest hill in this portion is near Dumanur and its height is 3,387 feet.

6. The drainage is mostly towards the south and east into the Noyal, and on the west, i.e. the plateau portions, the drainage is westwards into Kodungerupallam, a tributary of the Bhavani. Both the streams, Noyal and Bhavani, are important tributaries of the Cauvery and as such it is essential that the catchment areas of these streams should be carefully protected.

7. All aspects are represented.

SECTION 3.—GEOLOGY, ROCK AND SOIL.

8. The underlying rock is gneiss, which in many places outcrops in extensive sheets, as towards the west of Perumalmudi and below Kuridimalai. Quartz is fairly plentiful on the surface; occasionally sandstone and mica are found. Soil varies from poor, bouldery, shallow loam, on the eastern slopes of Thadagam, to moderately deep, and fairly rich loam, on the plateau. Humus is negligible except in the sholas, where it is thick and undecomposed.

SECTION 4.—CLIMATE.

9. The climate is hot and dry, but subject to high winds and fairly heavy showers of rain, from October to December. It is cool and pleasant from October to January. Both the monsoons are felt; the plateau portions of Anaikatty receiving more rainfall than the slopes facing Thadagam and Narsapuram.

10. There are no rain-gauge stations in the working plan area and so no record is available of the annual rainfall; but it is roughly estimated that the average rainfall may not exceed 25 inches per annum on the slopes and 40 inches on the plateau.

SECTION 5.—WATER-SUPPLY.

11. With the exception of Kodungerupallam, the boundary between Malabar and Coimbatore districts, no other stream in the tract dealt with, is perennial. The streams are in flood for from six to eight hours after continuous heavy rains in October to December, and they soon run dry. There are two streams, one near Perumalmudi and the other near Melmudi Rangaswamikovil, which contain a perennial supply of water

over half their way down the slope, but run dry before reaching the plains. A few perennial springs, with a limited quantity of water are, however, occasionally met with in the working plan area and the positions or names of the more important and well known of these are enumerated below for general information :—

Ponnuthammankovil, Melmudi Rangaswamikovil, Nava Kinar, Anubavi Subramania temple, Vannanparai, Semukarai stream, below Perumalmudi, Marudamalai, near Anaikatty, and higher up Ichikulipallam.

12. It is a matter of general interest to note here, that the villagers of Peria Thadagam have diverted water from Anubavi Subramania temple spring to their village over a distance of about one mile through pipes for their domestic use. The people of Chinna Thadagam are contemplating the making of a similar diversion to their village from Melmudi Rangaswamikovil spring.

13. The water level is very low in the valley, sometimes as deep as 100 feet in the villages. There is scarcity of water, even for domestic purposes, not to mention irrigation possibilities, in the villages lower down and so the necessity for the protection of the catchment areas of the streams in the working plan area, is emphasized.

SECTION 6.—DISTRIBUTION OF AREA.

14. The forests dealt with form one contiguous block of 31,084·36 acres as detailed hereunder :—

	ACS.
Part of Thadam Block IV reserve and its additions 2 to 16 and 21 ...	17,437·61
Part of Anaikatty North reserve	1,229·00
Whole of Anaikatty South	4,503·65
Whole of Bolampatty Block III	7,914·10

SECTION 7.—STATE OF THE BOUNDARIES.

15. The boundaries are indicated by cleared lines, originally intended to be 15 feet wide, but now reduced to a width of 6 feet, owing to the invasion of prickly-pear and lantana. Irregularly constructed rough-stone cairns at inadequate intervals are found over some sections of the reserve boundary, with numbered stone pillars let into them. Reserve boards are not found.

SECTION 8.—LEGAL POSITION.

16. The section 16 notifications with modifications, if any, thereon, legalizing the reserves dealt with in this plan, are noted below.

17. Thadagam Block IV was constituted a reserved forest in Notification No. 40, dated 10th February 1885, published on pages 93 and 94 of Part I of *Fort St. George Gazette*, dated 10th February 1885.

Thadagam additions 1 to 21 were notified as reserves in Notification No. 347, dated 14th July 1917.

Amended boundary description of Thadagam reserve was notified in No. 283, dated 30th April 1914.

Disforestation of 92·05 acres was published in Notification No. 385, dated 30th April 1914.

Disforestation of 390 acres was published in G.O. No. 734, Revenue, dated 10th March 1917.

The revised boundary description between North Coimbatore and Palghat divisions, transferring portions of Thadagam reserve to the former.

18. Anaikatty North and South were constituted reserved forests in Notification No. 33, dated 24th December 1915, published in *Fort St. George Gazette*, Part I, dated 24th December 1915, page 79.

Portion of Anaikatty North was transferred to North Coimbatore division and a revised boundary was notified.

19. Bolampatty Block III was constituted a reserved forest in Notification No. 227, dated 19th April 1884, published on pages 780 and 781 of Part I of *Fort St. George Gazette*, dated 2nd December 1884.

Disforestations were done in Notification No. 35, dated 7th January 1897 and in G.O. No. 734, dated 10th March 1917.

The boundary was amended and an area of 2·90 acres disforested in Notifications Nos. 328 and 331 published in Part I of *Fort St. George Gazette*, dated 22nd July 1913.

Section 9.—Rights and Concessions.

20. Rights and concessions admitted at the time of settlement in each reserve as well as those granted subsequently, are set out in Appendix I.

21. Most of the rights are for rights of way, and some concessions are extended to the Irulars in the forest for free grazing and collection of minor produce; but the rights and concessions admitted within the working plan area are not such as to interfere with the prescriptions of this working plan.

CHAPTER II.—THE FOREST.

Section 1.—Composition and Condition of the Crop.

22. The growth varies from poor scrub jungle, consisting of Dodonea viscosa, Euphorbias and some occasional stunted tree growth, with plenty of prickly-pear and thorny shrubs, as on the eastern limits of Thadagam and Bolampatty Block III reserves, to moderately good growth of fuel and small timber species consisting of *Albizzia amara*, *Anogeissus latifolia*, *Pterocarpus Marsupium*, etc., on the plateau portions of Thadagam and Anaikatty reserves. On higher elevations and in protected valleys the growth is of shola type, which on the slopes of Perumalmudi extends over about 400 acres. Grass lands are fairly common on higher elevations and near ridges.

23. A more detailed description of the composition and condition of the crop in each reserve is furnished below.

24. *Thadagam reserve.*—This reserve is in the form of a regular horse shoe, the hills rising rather sharply from about 2,000 feet to 5,300 feet on the flanges, and at the heel rather gently, up to an elevation of 2,300 feet, beyond which the country spreads out, into a series of low hills. For purposes of description the tract is divided naturally into two portions, viz., the plateau portion and the slopes facing the valley.

25. The plateau portions support a fairly dense forest consisting of *Albizzia amara*, *Albizzia Lebbeck*, *Anogeissus latifolia*, *Acacia leucophloea*, *Pterocarpus Marsupium*, *Atalantia monophylla*, *Canthium didymum*, *Ixora parviflora*, *Bridelia retusa*, *Buchanania latifolia*, *Terminalia chebula*, etc. The density of stocking varies from ·4 to full, and the average may be taken as ·6. Height growth is fair for the locality, about 30 feet on an average, and the trees attain an average girth of 3 feet. The biggest tree met with in the working plan area during inspection was a Vengai (*Pterocarpus Marsupium*), about 10 feet in girth, on the Kandivalli path. Undergrowth consists of shrubs, coarse grass, lantana and prickly-pear.

26. On the slopes of Perumalmudi there is a continuous belt of dry shola forest of little commercial importance, consisting of *Eugenias*, *Diospyros spp.* *Garcinias* *Cinnamon*, etc. Height growth is moderate and stocking nearly full. Reeds occur in patches. Undergrowth is scarce; towards the edges and in open places plenty of *Strobilanthes* exists. This shola, situated as it is at the head of streams flowing into the Thadagam valley should be carefully protected in order to conserve what little water flows into the valley now.

27. To the west of Perumalmudi and above the Mankarai fuel series there is an extensive area of sheet rock devoid of any growth.

28. On the tops of Maranshola Durgam and Kadalrishimalai there are one or two patches of shola forest, the rest being either rocky or grassy.

29. The slopes facing Thadagam valley are really poor in growth. Starting from the foot of the hill up to about 2,750 feet elevation, the growth consists of a poor type of fuel forest composed of *Albizzia amara*, *Protium caudatum*, *Ixora parviflora*, *Canthium didymum*, *Mundelia suberosa* and *Zizyphus spp.* with fairly plentiful standards of Euphorbias and a thick mass of prickly-pear and thorny shurbs. The trees are poor in height, say about 15 feet in the best portions and they rarely attain more than a foot in girth. The crop deteriorates in quality as one proceeds eastwards and beyond the paths to Melmudy Rangaswami Koil and Anubavi Subramania temple, on the northern and southern arms of the reserve, respectively, the type of growth dwindles to scrub.

30. Above this fuel zone a very degraded type of forest, consisting of stunted *Pterocarpus Marsupium*, *Anogeissus latifolia*, *Buchanania latifolia*, *Bridelia retusa*,

Dalbergia latifolia and *Phyllanthus emblica*, with a dense undergrowth of tall coarse grass, is met with, extending roughly to an elevation of 3,250 feet. Trees are stunted, fire scarred and generally unsound. The canopy is very open.

31. Above 3,250 feet elevation, up to the ridge, the ground is generally grassy or rocky. Some patches of shola are however found near Rangaswami temple, on the Kuridimalai slope, and to the west of Subramania temple.

32. *Bolampatty Block III Reserve.*—To the west of Ichikulipallam, up to an elevation of 3,250 feet from the foot of the reserve, the growth consists of *Albizzia amara*, *Atalantia monophylla*, *Ixora parviflora*, *Albizzia Lebbek*, *Zizyphus spp.*, etc.; stocking is moderate, height growth is also moderate, varying from 20 to 25 feet and the trees attain a girth of 2½ feet and less. There is a fair amount of prickly-pear but it is not very dense; grass is occasionally met with; thorny creepers are in plenty, especially Pterolobium indicum. Above 3,250 feet the growth mostly consists of *Anogeissus latifolia*, *Pterocarpus Marsupium*, *Terminalia chebula* and *Bridelia retusa*; the canopy is very open and dense grass is universal.

33. To the east of Ichikulipallam and till beyond Attukal, the growth gradually deteriorates in quality and eventually becomes scrub type. In places the hill side is devoid of any forest growth. Surrounding Marudamalai the sight is most appalling; every stick of fuel appears to have been removed in the past and the area appears to have been excessively grazed, allowing no forest growth to come up.

34. *Anaikatty North.*—The crop consists of *Ailbzzia amara*, *Ailbzzia Lebbek*, *Acacia leucophloea*, *Anogeissus latifolia*, *Pterocarpus Marsupium*, etc.; fairly well stocked, but rather open on hill tops, where *Anogeissus latifolia* and *Vengai* (*Pterocarpus Marsupium*) predominate. Height growth of trees is moderate, on an average about 25 feet and trees attain a girth of 3 feet. Lantana is moderately dense on the north-east, especially near Panapally village; prickly-pear is occasionally seen, being more common on lower elevations; Strobilanthes is fairly common; on higher elevations grass is universal.

35. *Anaikatty South.*—Tree growth is generally fair except on the hill towards west of Dumanur, where it is poor and scanty. The crop consists of *Albizzia amara* *Anogeissus latifolia*, *Pterocarpus Marsupium*, *Albizzia Lebbek*, *Albizzia odorotissima*, *Terminalia chebula*, *Atalantia monophylla*, etc. Some miserable specimens of teak are found on the south of the reserve. Height growth is in general fair, about 30 feet; trees attain an average girth of three feet; stocking is fair except on the hill tops where it is open. Prickly-pear is common on lower elevations but not dense; grass is in plenty; Strobilanthes is fairly abundant.

36. The southern third of the reserve is predominantly of bamboo type, the crop consisting of Bambusa arundinacea and occasionally Dendrocalamus strictus with a sprinkling of tree growth. Mature clumps are fairly common but young and middle sized ones predominate.

SECTION 2.—INJURIES TO WHICH THE CORP IS LIABLE.

37. On lower portions little damage is done to forest growth by fires. There is scarcely any chance of fires entering the reserve from outside as there is cultivation adjoining them and, in addition, there is a thick belt of prickly-pear round the edges. Fires are common on higher elevations where grass forms a dense undergrowth; they are mostly due to graziers setting fire to the jungle to obtain fresh shoots of grass for cattle. The trees are fire scarred; and regeneration, if any, is burnt down annually. There is at present no provision for fire protecting this tract nor will any such provision be effective against incendiaries.

38. *Grazing.*—Both from statistics and field observation it is obvious that these forests have been excessively grazed in the past, much above the possibility, to the detriment of the forest growth. The existing working plan for Thadagam has provided for grazing in excess of the possibility by levying a penal fee.

39. Till 1920 the average annual grazing incidence in Bolampatty Block III (area 7,914 acres) was 2,092 heads of cattle against the possibility of 1,580 heads based on provision of 5 acres of grazing ground per cow unit. From 1920 up to date the average annual incidence has been 2,981 cow units, nearly double the possibility.

40. Similarly in Anaikatty reserves the forest has been excessively grazed in the past, especially before reservation, and is just recovering from the injury.

41. *Man.*—Man is largely responsible for the poor type of forest we now see near Marudamalai and adjoining the Thadagam villages. Illicit fellings for fuel and small timber appear to have been heavy in the past with the result that the existing trees are mostly pollards.

42. *Wild animals.*—Damage by wild animals to forest growth is negligible except that in portions of Anaikatty South reserve wild elephants damage the saplings and bamboos. Occasionally they damage the field crops in the adjoining Irular settlements.

43. *Noxious plants.*—Prickly-pear is fairly common in the working plan area and is abundant on the slopes facing Thadagam valley and in portions of Bolampatty Block III. The pest has in some places taken such strong hold of the ground that it effectively prevents any forest growth from coming up. Attempts were made in the past to eradicate this pest from the annual coupes, especially in the Veerapandy felling series, but the work was found very expensive and not justifiable, considering the results achieved. Eventually the operation had to be given up (see paragraph 65). Lantana is not very common in the working plan area; it is however present near cultivation and it appears to be just invading the forest.

Climbers are fairly abundant; they retard the development of coppice shoots.

CHAPTER III.—UTILIZATION OF THE PRODUCE.

SECTION 1.—AGRICULTURAL CUSTOMS AND WANTS OF THE POPULATION.

44. The local population is mostly agricultural, residing in the villages of Thadagam and Bolampatty valleys. The bulk of their cultivation is dry, including cholam, castor, ragi, cumbu, horsegram, groundnut, tenai, samai, etc.

45. There are a few Irular settlements outside the reserve on the Anaikatty plateau. The chief occupation of the Irulars is cultivation—dry and shifting. They raise the same cereals as mentioned above. The more important of the settlements are at Dumanur, Kondanur, Panapally, Kilur, and Melur pathies and near Marudamalai temple (these Irulars are just living close to the temple and they have no cultivation of their own at present), and Urambupathy in Bolampatty Block III.

46. The requirements of the population are primarily grazing, and some fuel and small timber. These forests will be open to grazing, limited to the possibility, as detailed further on. Fuel can be collected by the people from the coupes on payment to the contractor, for head-loads or cart-loads as the case may be. Most of the local people do not need fuel from our forests, for the greater part of the year, as they use the stalks of cereal crops and for the rest of the year, say for two or three months, they collect fuel from their patta lands; or what is more common, they take out permits from the Muppil Nayar for collection of fuel from his forests, in which case they have to pay only six annas a cart-load.

47. There is a small demand for timber from the local population for agricultural and house building purposes. The people generally get their requirements from the private forests as they find it cheaper and they may also buy such small timber from the annual coupes. The more common timbers used locally are.

48. For carts—

Shafts and frame pieces.—*Dalbergia latifolia, Pterocarpus Marsupium, Grewia tiliaefolia, Albizzia odorotissima and Acacia leucophloea.*

Wheel boxes.—*Albizzia odorotissima, Pterocarpus Marsupium, and Acacia* leucophloea.

Spokes.—*Albizzia odorotissima* and *Pterocarpus Marsupium.*

Felloes.—*Acacia leucophloea* and *Pterocarpus Marsupium.*

49. For house construction—

Pterocarpus Marsupium, Grewia tiliaefolia, Dalbergia laifolia, Albizzia odorotissima, etc.

50. Agricultural implements—

Ploughs.—Dalbergia latifolia, Albizzia Lebbek, Melia indica, and *Acacia leucophloea.*

Plough handles.—Albizzia amara, Zizyphus spp., Melia indica and *Chloroxylon Swietenia.*

Yokes.—Albizzia amara and *Zizyphus spp.*

51. There is a small local demand for bamboos which the people obtain from the bamboo coupe contractor or from the Attapady private forests.

SECTION 2.—MARKETS AND MARKETABLE PRODUCTS.

52. The principal market for the consumption of the products obtained from these forests is Coimbatore. In addition to meeting the requirements of the population of Coimbatore for fuel, the produce can be supplied to the mills. The demand for fuel at Coimbatore is so great that the quantity proposed to be extracted under this working plan is not in any way likely to flood the market. The average annual demand for fuel at Coimbatore is more than 20,000 tons.

53. In addition to the Coimbatore market a small percentage of the outturn of fuel will be consumed by the villagers living close to the reserves.

54. Marketable products are chiefly fuel, bamboos and small timber. Among minor products the following may be mentioned. Shekoy, honey, wax, avaram bark, date leaves, Tamarind seeds, Galnuts and horns, etc.

SECTION 3.—LINES OF EXPORT.

55. The two important export routes are :—

(*a*) the Anaikatty-Coimbatore cart track and

(*b*) the cart track from Thuppepalayam to Coimbatore via Thondamuthur.

56. Distances between important places in the working plan area :—

	Miles.
Chinnathadagam to Coimbatore	10
Mankarai to Coimbatore	13
Anaikatty to Mankarai	7
Thuppepalayam to Thondamuthur	4
Thondamuthur to Coimbatore	9

SECTION 4.—METHODS OF EXPLOITATION AND THEIR COST.

57. From the time of reservation till 1905 or so, the produce from these forests was removed by consumers on permits.

58. Subsequently, under a system of located fellings and under the prescriptions of the old working plans, coupes were sold standing to contractors, except that three coupes in Mankarai and one in Veerapandy felling series, were worked departmentally.

59. The following figures, though very approximate, give an idea as to the cost of exploitation and transport of the chief produce here—fuel. One ton of fuel is reckoned as two cart-loads or 80 cubic feet stacked. Where the road is good and the bulls sturdy a cart-load of fuel will approach ¾ of a ton :—

	RS.	A.	P.		RS.	A	P.	
To felling and stacking 80 cubic feet or one ton of fuel	1	8	0	to	2	0	0	
To transport to foot of hill	1	8	0	to	2	0	0	
To transport from foot of hill to Coimbatore ...	3	8	0	to	4	0	0	
Total ...	6	8	0	to	8	0	0	per ton.

The prevailing selling rate of fuel at Coimbatore is Rs. 13 to Rs. 14 per ton.

60. Minor forest produce is collected by contractors through their coolies on permits. The figures obtainable as to the cost of collection of such products are so meagre and unreliable that they are not incorporated here.

SECTION 5.—PAST AND CURRENT PRICES.

61. The prices fetched by the sale of fuel coupes in the past are furnished under the heading 'Past yields'.

CHAPTER IV.—STAFF AND LABOUR SUPPLY.

SECTION 1.—STAFF.

62. The present staff employed on works and in the protection of the area dealt with under this plan is given in the following table. The apportionment of the pay of the Range Officer towards this working plan area is made approximately; about one-fifth is the correct proportion, as he spends about six days in the month in this area :—

Designation.	Headquarters	Jurisdiction.	Grade number.	Pay.	Total.	Proportionate cost for Working Plans area.	
				RS.	RS.	RS.	A.
Range Officer ..	Iruttupallam ..	Bolampatty Range ..	V	125	125	25	0
Range clerk ..	Do. ..	Do. ..	..	42	42	10	0
Range peon ..	Do. ..	Do. ..	..	12	12	3	0
Tappal watchers ..	Do. ..	Do. 2	..	12	24	6	0
Forester	Narasapuram ..	Narasapuram section.	V	30	30	15	0
Forest guard ..	Do. ..	Poondy beat ..	IV	15	15	7	8
Forest watcher ..	Do. ..	Do. ..	..	12	12	6	0
Forest guard ..	Kempanur ..	Marudamalai beat ..	IV	15	15	15	0
Forest watcher ..	Do. ..	Do. ..	..	12	12	12	0
Forester	Chinnathadagam ..	Thadagam	I	52	52	52	0
Forest guards ..	Do. ..	Thadagam, North (1). Do. South (1). Anaikatty .. (1)	IV	15	45	45	0
Forest watchers ..	Do. ..	Do. .. 3	..	12	36	36	0
			Total ..	..	420	230	8

SECTION 2.—LABOUR.

63. Coupes are generally sold standing to contractors and there are at present very few works in the tract dealt with under this plan. Ample labour is always available among the Irulars on the plateau and this can be supplemented whenever necessary from the plains, to carry out the prescriptions contained in this plan.

64. Unskilled labour, whether Irular or plainsman, is paid at the rate of eight annas per head a day.

CHAPTER V.—PAST SYSTEMS OF MANAGEMENT.

SECTION 1.—GENERAL HISTORY OF THE FOREST.

65. From the time of its constitution in 1885, Thadagam Reserve was worked under the permit system, with the result that fellings took place all over the forest without any discrimination or restriction. In 1902 the reserve was brought under systematic management under two working plans prepared by Mr. Foulkes for the Mettupalayam and Bolampatti ranges, sanctioned in Board's Proceedings Nos. 138 and 141 of 1902. The method prescribed under these plans was "pure coppice", with the restriction that no tamarind tree was to be felled and no growth to be cut for a width of two chains on either bank of any stream in the area worked. But the working plans failed, perhaps due to the high cost of exploitation or owing to the unworkability of certain areas. Owing to subsequent increased demand for fuel, located fellings were started in 1906–07 near Mankarai and the fellings were extended annually according to demand. In 1912 Mr. Panchapakesa Ayyar, the District Forest Officer of Central Coimbatore, took up the revision of Mr. Foulkes' plan, in which he prescribed fuel coupes in Mankarai and Veerapandy series and suggested improvement fellings in the degenerated areas to the north of Mankarai series. In 1914, the Board returned Mr. Panchapakesa Ayyar's plan to be revised and the present plan by Mr. Habibullah Sahib was drawn up under the orders of the Conservator, Mr. McCarthy. Under this new plan, two felling series were formed, one in Mankarai and the other in Veerapandy, with annual coupes of about 80 and 90 acres respectively to be worked under 'coppice with standards'. In addition a complete working scheme for eradication of prickly-pear in the fuel working circles

and a grazing scheme on new lines, which aimed at eventually reducing the grazing incidence to the possibility, were added. The plan was sanctioned in Board's Proceedings Forest No. 309, Miscellaneous, dated 2nd November 1917, slightly modifying the prescriptions for eradication of prickly-pear. The eradication of prickly-pear was in course of time found to be expensive and not justifiable in view of the results achieved, and the scheme was abandoned under the orders of the Chief Conservator of Forests in his Proceedings No. 1458, Routine, dated 25th November 1919. The system of 'coppice with standards' was found unsatisfactory and under the orders of the Chief Conservator in his Proceedings No 11, Miscellaneous dated 9th January 1920, 'simple coppice' was adopted and this system is being continued still.

66. From the time of its reservation in 1884 till 1902, Bolampatti Block III was worked under the permit system. During this period the average annual outturn of fuel was about 22,250 cubic feet. It is probable that the most accessible and favourable localities were worked under this system. In 1902 the reserve was included in Mr. Foulkes' working plan for the Bolampatty Range, sanctioned in Board's Proceedings No 141 For., dated 3rd May 1902, wherein it was prescribed that two felling series would be formed, one near Marudamalai and another near Kempanur, with annual coupes of about 40 acres each to be worked under 'pure coppice' with the restriction that no tamarind tree should be felled, nor any felling conducted to a width of two chains on either bank of any stream in the coupe. It is not possible to trace any records as to the extent to which the reserve was worked under this plan. However, the plan was found to be unworkable and was cancelled. Since then, the reserve has not been brought under any systematic working plan. In 1925 an experimental fuel coupe was sold near Attukal, about 89 acres in extent, for Rs. 579-4-0 and the outturn obtained from this area was 26,600 cubic feet of fuel.

67. The Anaikatty North and South areas were constituted reserve forests only in 1915 and since then there have been no fellings in them under any systematic management. In 1924 the reserve was leased for bamboo extraction. It may be mentioned here that, prior to reservation, these two reserves were so heavily overgrazed that the forest growth had not a chance of coming up.

Section 2.—Past Systems of Management and their Results.

68. The Anaikatty reserves were never worked under any regular system of management.

69. With the exception of a few years under Mr. Foulkes' working plan, the Bolampatty Block III reserve also has not so far been brought under any regular system of working.

70. The Thadagam reserve, as mentioned already, was worked indiscriminately under the permit system from the time of its reservation till 1902.

71. In 1902 it was brought under 'pure coppice' under Mr. Foulkes' working plan, but since this plan had to be given up, located fellings under 'coppice with standards' were started in Mankarai and up to 1915 about 512·74 acres had been exploited under this scheme. In 1912–13 another located felling series was started in Veerapandy and the area worked up to 1915 under this scheme was 116·50 acres.

72. Mr. Habibullah's plan for the Thadagam reserve prescribed two working circles, Mankarai and Veerapandy, to be worked under 'coppice with standards'. In 1920 the system was changed to 'simple coppice' which continues till now.

73. Under this working plan 741·40 acres in Mankarai and 1,113·36 acres in Veerapandy working circles had been worked up to the end of 1928. During this year (1929), Coupe No. XVI (86·00 acres) in Mankarai and Coupe No. XV (84·00 acres) in Veerapandy working circles are being exploited.

74. In the past no prescriptions were made regarding cleaning and climber cutting in fuel coupes, with the result that the coppice shoots have been retarded in their development.

Section 3.—Special works of improvement undertaken.

75. The following statement gives the roads and buildings with details as to their cost of construction and maintenance for the last ten years :—

(*a*) A rest house at Mankarai, consisting of two sets of rooms, was constructed in 1921 at a cost of Rs. 4,339-9-1 and the cost of maintenance till date has been Rs. 116-14-0.

(*b*) An outhouse at Mankarai consisting of two rooms, was constructed in 1925 at a cost of Rs. 635.

(*c*) The coupe road through Mankarai felling series over a distance of two miles and two furlongs was constructed in 1928 at a cost of Rs. 1,069–5–0 and the road was maintained during 1928–29 at a cost of Rs. 64–0–0.

(*d*) The portion of the road passing through the Thadagam reserve from Mankarai to Mungilpallam, a distance of two miles, is being maintained at an annual cost of about Rs. 30–0–0.

Section 4.—Past Yields.

76. As the coupes were mostly sold to contractors for extraction, the yield figures furnished by them may not be quite reliable. The following table shows the annual coupes worked in Thadagam reserve, the outturn and the prices obtained for them, as far as could be collected from the control registers :—

Year of working.	Coupe number.	Area in acres.	Method.	Outturn fuel.	Price obtained.
			Mankarai felling series.		
				C. FT.	RS. A. P.
1906–07	I	96·10	Coppice with standards ..	..	..
1907–08	II	93·00	Do ..	36,760	Worked departmentally.
1908–09	III	97·75	Do. ..	43,880	
1909–10 / 1910–11	IV	40·00	Do. ..	Not known.	305 0 0
1911–12	V	132·89	Do. ..	63,735	260 0 0
1912–13	VI	55·00	Do. ..	51,454	577 8 0
1913–15	VII	50·00	Do. ..	24,140	518 12 0
1915–16	VIII	73·00	Do. ..	15,555	438 0 0
1916–18	IX	140·62	Do. ..	33,840	435 0 0
1917–18	X	115·00	Do. ..	40,000	603 12 0
1918–19	IX	52·15	Do. ..	24,840	776 14 0
	X	25·00	Do. ..	4,760	269 3 6
	XI	45·00	Do. ..	18,680	520 8 0
1919–20	XI	56·00	Do. ..	14,160	
	XII	26·33	Do. ..	22,800	104 8 0
	XII	78·67	Simple coppice	29,959	300 0 0
1920–21	XIII	70·00	Do.	75,040	571 12 0
1921–22			No felling.		
1922–23	XIV	59·28	Simple coppice	42,600	605 2 0
1923–24	XV	30·50	Do.	10,200	1,061 2 6
1924–25	XV	10·00	Do.	2,441	
1925–26 / 1926–27			No felling for want of export road.		
1928	XV	88·85	Simple coppice	25,958	1,880 0 0
	Total ..	1,435·14		5,80,802	9,227 2 0
			Veerapandy felling series.		
1912–13	I	25·00	Coppice with standards ..	600	18 12 0
1913–14	II	26·50	Do. ..	19,280	165 12 0
1914–15	II b.	60·00	Do. ..	28,000	330 0 0
1915–16			No felling.		
1916–17	III	105·00	Coppice with standards ..	21,280	367 8 0
1917–18	IV	110·68	Do. ..	37,320	1,023 12 0
1918–19	IV	30·00	Do. ..	7,840	105 0 0
	V	10·00	Do. ..	1,160	29 10 0
1919–20	V	77·00	Simple coppice	9,800	304 8 0
	VI	42·50	Do.	28,400	740 14 0
1920–21	VII	87·12	Do.	14,800	311 6 0
1921–22	VIII	80·95	Do.	31,200	323 13 0
1922–23			No felling.		
1923–24	IX	91·58	Simple coppice	16,520	286 3 0
1924–25	X	78·38	Do.	18,041	318 8 0
1925–26	XI	121·00	Do.	76,965	2,178 0 0
1926–27	XII	77·00	Do.	10,900	1,270 8 0
1927	XIII	82·00	Do.	..	1,640 0 0
1928	XIV	81·00	Do.	7,430	2,835 0 0
	Total ..	1,185·71		329,536	12,249 2 0

77. The other two blocks, Anaikatty and Bolampatty III, were not worked during the last twenty years or so, for any major produce, except that an experimental-fuel coupe of 89 acres near Attukal in Bolampatty block III was sold in 1926 at the rate of Rs. 5–12–0 an acre and the outturn obtained from the area was 26,600 cubic feet of fuel.

SECTION 5.—PAST REVENUE AND EXPENDITURE.

78. As no separate record is kept for this working plan area for revenue derived from grazing, minor forest produce, and miscellaneous for some years, a reasonable apportionment of revenue has been made towards this working plan area.

Year.	Fuel sale.	Bamboos.	Grazing.	Minor Forest Produce.	Miscellaneous.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1919-20	1,308 10 0	..	2,315 0 0	125 0 0	48 0 0	3,796 10 0
1920-21	..	..	2,441 4 0	795 0 0	18 0 0	3,254 4 0
1921-22	252 4 2	..	2,080 8 0	35 0 0	7 10 0	2,375 6 2
1922-23	931 7 0	..	2,890 14 0	231 10 0	660 10 0	4,714 9 0
1923-24	816 12 9	757 8 0	3,228 12 0	615 13 0	601 8 0	6,020 5 9
1924-25	844 1 2	757 8 0	2,949 0 0	606 0 0	365 14 0	5,522 7 2
1925-26	2,782 4 0	..	1,953 0 0	404 0 0	411 12 0	5,551 0 0
1926-27	1,270 8 0	310 0 0	3,088 0 0	980 14 0	102 6 9	5,751 12 9
1927-28	1,640 0 0	..	3,873 12 0	918 0 0	287 8 0	6,719 4 0
1928-29	4,715 0 0	..	2,464 4 0	75 0 0	331 15 0	7,586 3 0
Total 10 years ..	14,560 15 1	1,825 0 0	27,284 6 0	4,786 5 0	2,835 3 9	51,291 13 10

79. The expenditure incurred on works and the establishment employed on protection in the working plan area for the last ten years is furnished below. There has been very little expenditure on works and so no attempt has been made to divide them under various heads. The establishment charges have been reasonably apportioned to this area.

Year.	Cost of establishment.	Conservancy and works.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.
1919-20	3,350 3 8	3,333 0 0	6,683 3 8
1920-21	3,380 7 7	2,323 10 10	5,704 2 5
1921-22	3,833 1 3	436 2 0	4,269 3 3
1922-23	3,515 3 0	1,094 0 4	4,609 3 4
1923-24	6,532 0 0	353 13 0	6,885 13 0
1924-25	5,008 14 0	815 0 0	5,823 14 0
1925-26	4,827 0 0	235 2 0	5,062 2 0
1926-27	4,190 0 0	183 3 0	4,373 3 0
1927-28	5,929 5 0	106 14 0	6,036 3 0
1928-29	3,820 0 0	361 1 0	4,181 1 0
Total ..	44,386 2 6	9,241 14 2	53,628 0 8

80. The following profit and loss statement for the last ten years may be of interest.

Year.	Revenue.	Expenditure.	Profit.	Loss.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1919-20	3,796 10 0	6,683 3 8	..	2,886 9 8
1920-21	3,254 4 0	5,704 2 5	..	2,449 14 5
1921-22	2,375 6 2	4,269 3 3	..	1,893 13 1
1922-23	4,714 9 0	4,609 3 4	105 5 8	..
1923-24	6,020 5 9	6,885 13 0	..	865 7 3
1924-25	5,522 7 2	5,823 14 0	..	301 6 10
1925-26	5,551 0 0	5,062 2 0	488 14 0	..
1926-27	5,751 12 9	4,373 3 0	1,378 9 9	..
1927-28	6,719 4 0	6,036 3 0	683 1 0	..
1928-29	7,586 3 0	4,181 1 0	3,405 2 0	..
Total ..	51,291 13 10	53,628 0 8	6,061 0 5	8,397 3 3

The loss shown in 1919 is due to the high cost incurred in the eradication of prickly-pear from the worked coupes. In 1920 to 1922 the loss is due to the cost of constructing a rest house at Mankarai at a cost of Rs. 4,340. From 1922 the financial results have been more satisfactory and the last four years have successively shown profits.

CHAPTER VI.—STATISTICS OF GROWTH AND YIELD.

81. No data have been collected in the past.

CHAPTER VII.—ESTIMATE FOR THE CAPITAL VALUE OF FORESTS.

82. There are no data on which to base an estimate of the capital value of the forests.

PART II.

Future Management Discussed and Prescribed.

CHAPTER I.—BASIS OF PROPOSALS.

SECTION 1.—GENERAL OBJECTS OF MANAGEMENT.

83. The objects sought to be attained by the prescriptions contained herein are—

(*a*) to obtain a sustained annual yield of fuel and small timber, limited to the possibility of the forest, under a method of systematic treatment suited to the sylvicultural requirements of the species, in the hope of eventually attaining an approximately normal forest,

(*b*) to protect the water sources and the fertility of the soil by rigid protection of the forests,

(*c*) to establish regeneration to as normal an extent as possible by natural methods—coppice, and

(*d*) to meet the demand of the local population for firewood, grazing and small timber, by suitably distributed felling series.

SECTION 2.—METHODS OF TREATMENT TO BE ADOPTED.

84. The species composing the forest dealt with coppice readily and method of treatment prescribed to achieve the above objects of management is 'Simple coppice'.

SECTION 3.—WORKING CIRCLES, THEIR AREA AND DISTRIBUTION, REASONS FOR THEIR CONSTITUTION.

85. There will be five working circles distributed as follows:—

(*a*) The 'Coppice Working Circle' with an area of 7,085 acres distributed among the following reserves—

	ACS.
Thadagam reserve	3,300
Anaikatti, North	820
Do. South	1,600
Bolampatti, Block III reserve	1,365

(*b*) The 'Protection Working Circle' with an area of 22,319·36 acres distributed as follows—

	ACS.
Thadagam reserve	14,137·61
Anaikatti, North	409·00
Do. South	1,223·65
Bolampatti, Block III	6,549·10

(*c*) The 'Bamboo Working Circle' consisting of an area of 1,680 acres forming one compact block on the south of Anaikatti South reserve.

(*d*) The 'Minor Produce' Working Circle' comprising the whole of the working plan area.

(*e*) The 'Grazing Working Circle' comprising the whole of the working plan area with the exception of coupes in which the regrowth is ten years old or less.

SECTION 4.—THE PERIOD OF WORKING PLAN AND THE NECESSITY FOR FURTHER REVISION.

86. The prescriptions under this plan are laid down for ten years, from 1st January 1930 to 31st December 1939.

87. No need for any intermediate revision of the plan is anticipated.

88. In order to maintain uniformity over the whole of Bolampatti range, and since 'the Working plan for the Bolampatti Valley forests' has adopted the calendar year instead of the official year for coupe working and for control, it is considered desirable to have the same system here also.

CHAPTER II.—WORKING PLAN FOR THE COPPICE WORKING CIRCLE.

SECTION 1.—GENERAL CONSTITUTION OF THE WORKING CIRCLE AND CHARACTER OF THE VEGETATION.

89. The area under this working circle will be distributed under three felling series:—

(a) *The Mankarai felling series*, comprising an area of 3,300 acres.
(b) *The Anaikatti felling series*, consisting of an area of 2,420 acres.
(c) *The Ichikuli felling series* with an area of 1,365 acres.

90. The Mankarai felling series comprises the better stocked plateau portions of Thadagam Block IV reserve varying in elevation from 2,000 to 3,387 feet. It supports mostly a fuel type of forest with some small timber. The growth chiefly consists of *Albizzia amara*, *Albizzia Lebbek*, *Anogeissus latifolia*, *Pterocarpus Marsupium*, *Diospyros spp.*, *Atalantia monophylla*, *Canthium didymum*, *Ixora parviflora* and *others*. A detailed list of species occurring in the working plan area will be found in Appendix II. The stocking is generally fair; the height growth is moderate; the soil is poor to moderately deep loam with some quartz boulders and occasional mica on the surface; the drainage is fair; and the average outturn of fuel per acre may be about eight tons. Prickly-pear is scattered, but is more common on the lower portions of the series. Lantana is moderately dense, especially adjoining villages. Strobilanthes and shrubby undergrowth is fairly abundant; coarse grass is universal. From the commencement of working in 1906 to date, inclusive of the current year's coupe, the total area worked over in this felling series amounts to 1,521 acres, of which the area worked under 'coppice with standards' is 1,098 acres and under 'simple coppice' 423 acres.

91. The Anaikatti felling series, comprised of the more accessible and better stocked portions of Anaikatti North and South reserves, supports a crop very similar in growth and composition to that described under Mankarai felling series. The soil consists of a moderately deep loam with boulders, and the drainage is fair. The average outturn of fuel per acre may be about seven tons. Lantana is prevalent in adjoining villages, prickly-pear scanty, and tall coarse grass is abundant especially on higher elevations. This is a new felling series and no portion of it has ever been worked under any method of treatment.

92. The Ichikuly felling series consists of the accessible western portions of Bolampatty Block III where the growth also is fit for exploitation. The name of the series is derived from the stream which flows through it, viz., Ichikulipallam. Illicit fellings have been taking place in the past to such an extent that it is found imperative now to open this series so as to afford the villagers a legitimate source of obtaining their fuel requirements. The growth here consists of *Albizzia amara*, *Albizzia Lebbek*, *Atalantia monophylla*, *Ixora parviflora*, *Protium caudatum*, and, on higher elevations, some *Anogeissus latifolia* and *Pterocarpus Marsupium*. The soil is shallow generally, bouldery and friable and devoid of any humus. The height growth of trees varies from poor to moderate; stocking is moderate and canopy open; the average outturn of fuel may be about 5 tons per acre. There is a fair amount of prickly-pear in the area, moderately dense at low elevations and less so higher up; thorny climbers and shrubs are plentiful.

93. The present Veerapandy Felling Series formed under the Working Plan of Mr. Habibullah will be closed to further working for fuel in view of the following reasons:—

(a) The growth here is so poor and open that it is considered sylviculturally inadvisable to work for fuel.

(*b*) Prickly-pear and Euphorbias have taken such strong hold of the area that any further opening of the canopy, which is already very open, will result in intensifying the trouble.

(*c*) Cost of exploitation increases on account of the dense mass of prickly-pear.

(*d*) The better coupes in this series have already been worked over and those that are left for further working are poor, and the probable outturn of fuel is not likely to be more than 2 tons per acre and it would be economically unsound to work these coupes any longer.

(*e*) The villagers close by do not depend for their fuel on this felling series; in fact, they have given a statement to the Working Plan Officer to the effect that they have no objection to closing down this felling series; on the other hand they very much prefer to have it abandoned so that they can have an increased area for grazing their cattle.

(*f*) Grazing facilities are so poor in this locality that every endeavour shoul be made to preserve the forest growth so as to check the spread of prickly-pear.

94. The area worked over in this felling series from 1912 to date is 1,270 acres.

SECTION 2.—BLOCKS AND COMPARTMENTS.

95. On account of the poor quality of the forests dealt with under this plan, no attempt at any division of the area into compartments was made; but the area falls naturally into four blocks, the Thadagam block constituting the Mankarai series; the Anaikatty North and South blocks comprising the Anaikatty series and the Bolampatty block III constituting the Ichikuli series.

SECTION 3.—ANALYSIS AND VALUATION OF THE CROP.

96. In view of the poor and irregular types of forest met with in the working plan area, it has not been considered worth while to carry out enumeration or valuation surveys; however, the average expected outturn of fuel per acre in these series is based on the average results of past working and on occular estimates after detailed inspection of the areas.

SECTION 4.—METHOD OF TREATMENT.

97. *System.*—The salvicultural system will be ‘ simple coppice ’.

98. *Rotation.*—The rotation will be thirty years. No attempt has been made to determine theoretically the most favourable rotation as the tract has not been dealt with in the past under normal sylvicultural conditions. Judging from the growth of the coppice in the worked coupes it is expected that a rotation of thirty years will be suitable, when the average coppice growth will attain a girth of about 2 feet.

99. The allotment of annual coupes has been made for ten years only; on revision of this plan at the end of the period further coupes should be allotted. The area suitable for such further allotment is indicated in the map accompanying this plan.

100. *Yield.*—The yield is fixed by area; roughly one-thirtieth of the area under each felling series will be worked annually. A rough estimate of the average yield per acre based on detailed inspections of the forest, combined with the results of past working, is furnished below for information. It should be borne in mind that the estimates of yield given below are very approximate and they should be applied with great caution:—

Mankarai felling series—8 tons of fuel per acre.
Anaikatty felling series—7 tons of fuel per acre.
Ichikuli felling series—5 tons of fuel per acre.

SECTION 5.—METHOD OF EXECUTING THE FELLINGS.

101. Annually one coupe in each felling series will be sold by the District Forest Officer in public auction to a contractor, who will execute the coppice felling in accordance with the terms of the agreements now in force in the district. The annual coupes will be marked on the ground by a cut line six feet wide and coupe stones will be planted at the corners of the coupe showing the number of the coupe and the year of working, chiselled on the stones and painted with tar.

102. The coupes will be divided into a suitable number of strips before auctioning. Felling in the next strip may not be allowed until the first strip is inspected and passed by an officer not below the rank of a Ranger.

103. The fellings should invariably commence at the top of a slope and proceed downwards.

104. In the event of there being no reasonable offer for the fuel coupes at the auction, they should be carried forward to the following year and sold as arrear coupes :—

Section 6.—Tabular statement of felling and subsidiary operations.

105. *Statement of coppice fellings.*—

Year.	Mankarai series.		Anaikatty series.		Ichikuli series.	
	Coupe number.	Area in acres.	Coupe number.	Area in acres.	Coupe number.	Area in acres.
1930	I	110·00	I	80·00	I	40·00
1931	II	110·00	II	80·00	II	40·00
1932	III	110·00	III	80·00	III	40·00
1933	IV	110·00	IV	80·00	IV	40·00
1934	V	112·00	V	80·00	V	40·00
1935	VI	106·00	VI	80·00	VI	40·00
1936	VII	108·00	VII	80·00	VII	40·00
1937	VIII	108·00	VIII	86·00	VIII	40 00
1938	IX	108·00	IX	88·00	IX	40·00
1939	X	108·00	X	86·00	X	40·00

106. *Statement of cultural operations—Cleanings*—

Year.	Mankarai series.		Anaikatty series		Ichikuli series.	
	Coupe number.	Area in acres.	Coupe number.	Area in acres.	Coupe number.	Area in acres.
1930	..	..	..	..	..	..
1931	I	110·00	I	80·00	I	40·00
1932	II	110·00	II	80·00	II	40·00
1933	III	110·00	III	80·00	III	40·00
1934	IV	110·00	IV	80·00	IV	40·00
1935	V	112·00	V	80·00	V	40·00
1936	VI	106·00	VI	80·00	VI	40 00
1937	VII	108·00	VII	80·00	VII	40·00
1938	VIII	108·00	VIII	86·00	VIII	40 00
1939	IX	108·00	IX	88·00	IX	40·00

107. When this working plan is revised in 1940 cleaning in coupe X of each series should be provided for in that year.

Section 7.—Subsidiary sylvicultural regulations.

108. *Cleaning.*—In the year following the felling of each fuel coupe a thorough cleaning will be done which will consist of the removal of noxious shrubs, weeds and creepers interfering or likely to interfere with the development of the coppice shoots of valuable species. This cleaning should not cost more than Re. 1 per acre. Whether the year following felling will be the correct time at which to undertake it, will be a question for the Conservator's decision in 1933.

Section 8.—Control.

109. The forms prescribed for control are—

The Control Book ;
The Record of Works and
The Control Journal.

110. The District Forest Officer will be personally responsible for the proper maintenance of the control records.

111. Sample entries of control forms are shown in Appendix III.

112. *The Control Book.*—A big bound book will be maintained, with a sufficient number of pages allotted to each felling series under the 'Coppice Working Circle' and an appropriate number of pages will be allotted to the other working circles.

113. *Record of Works.*—A book will be maintained for this purpose and pages will be apportioned to the following felling series :—

Mankarai felling series.
Anaikatty felling series.
Ichikuly felling series.

of 'the Coppice Working Circle' and additional pages will be allotted to works common to the whole working plan area referred to in Chapter VIII "Miscellaneous Regulations".

114. *The Control journal.*—The book will be maintained by the District Forest Officer in accordance with instructions contained in the Forest Code. The register will be for the whole working plan area and it should generally be carried by the District Forest Officer into camp.

115. Any area left unfelled in one year should be brought forward as soon as the control forms for the year are posted, as arrear in the following year's control forms in the left hand column.

116. *Indicator area.*—In view of the difficulty of choosing really representative areas in an irregular type of forest like the one dealt with under this plan, the standard practice of felling an indicator area each year is unsuitable and is not prescribed. The District Forest Officer should make a preliminary detailed inspection of the coupes before sale and estimate for his own information what the probable value of his coupes is per acre, in view of the nature of the growth, past prices, extraction facilities, etc.

CHAPTER III.—WORKING PLAN FOR THE PROTECTION WORKING CIRCLE.

SECTION 1.—GENERAL.

117. This working circle includes the entire area under this working plan with the exception of the areas under the coppice and bamboo working circles. The major part of this working circle is in Thadagam and Bolampatty Block III Reserves. There is a continuous block of about 400 acres of shola forest on the slopes of Perumalmudy and patches occur in protected valleys.

The major portion of the working circle includes the inaccessible portions, rocky and grassy areas, and areas which support a degraded type of forest consisting of stunted Anogeissus latifolia, Vengai (Pterocarpus Marsupium), Buchanania latifolia, etc., with thick coarse grass as undergrowth.

This working circle includes also the poor fuel forests of the old 'Veerapandy Felling Series', portions of which were worked under the plan of Mr. Habibullah and are at present overrun with prickly-pear and thorny climbers and bushes.

SECTION 2.—BLOCKS AND COMPARTMENTS.

118. The area, as already mentioned, is not divided into compartments and the blocks included under this working circle have been already enumerated in paragraph 85 (*b*).

SECTION 3.—METHOD OF TREATMENT.

119. The entire working circle will be given complete rest from fuel operations but it will be open to grazing and collection of minor forest produce so as to derive any legitimate revenue from it without injuring the forest growth in general.

These areas should also be protected in order to conserve the water-supply in the springs emerging from them.

CHAPTER IV.—WORKING PLAN FOR THE BAMBOO WORKING CIRCLE.

120. Good bamboo growth is limited to about 1,680 acres only, forming one compact block on the southern portion of Anaikatty South Reserve. The area being too small to form a series with three coupes, it is prescribed that the bamboo area

should be leased out every third year commencing from 1930 for working one year only. In respect of working it suffices to prescribe that no shoot of the year be cut and that not less than five culms be left in any clump.

121. In the control book entries will be made showing the year of working, the quantity of produce obtained and the price fetched.

CHAPTER V.—WORKING PLAN FOR THE MINOR PRODUCE WORKING CIRCLE.

122. The existing system of annually leasing out the entire range for the collection of minor forest produce will be continued. The revenue to be apportioned to this working plan area will be one third of the total revenue.

123. In the control book entries will be made showing the nature and quantity of the produce removed for the whole Range, the revenue for the whole Range and one-third of both as appertaining to this working circle.

CHAPTER VI.—WORKING PLAN FOR THE GRAZING WORKING CIRCLE.

124. The entire working plan area with the exception of all worked over coupes, of this plan and of the previous schemes, will be open to grazing.

125. In their order No. Mis. 1816, Development of the 25th October 1929 Government have declined to agree to the limitation of grazing to the possibility of each forest or to raising grazing fees with the same object. And as grazing is permitted in all the forests of a range on a single grazing fee, unlimited and unrestricted grazing must be contemplated. Should the present policy be modified and the restriction of grazing again become possible, then grazing incidence will be limited to the possibility of the forest, as worked out below, based on 5 acres of grazing ground per cow unit.

The area of Thadagam Reserve is 17,437·61 acres.

From this deduct area of ten coupes in which regeneration is ten years old or less about	1,100·00 acres.
Deduct inaccessible areas, shola forests where there is practically no grazing, etc., roughly	1,000·00 ,,
Balance area of the reserve fit for grazing is 15,337·61 or say 15,300 acres and the possibility for this reserve will be ...	3,060 cow units.

The area of Anaikatty reserves is 5,732·60 acres.

Deduct area of ten annual coupes	800·00 acres.
Balance area available for grazing	4,932·65 ,,
And so the possibility for this reserve will be	1,000 cow units.

The area of Bolampatty Block III is 7,914·00 acres.

Deduct area of ten coupes	400·00 acres.
Deduct area of inaccessible and rocky portions roughly ...	700·00 ,,
Balance area available for grazing is 6,814 or 6,800 acres and the possibility for this reserve is therefore	1,360 cow units.

It is stated that the steep slopes are not grazed over. Were they subject to grazing and trampling, they should be closed altogether, an action which is permissible under the orders of Government already quoted. This matter must be watched and should be a subject for enquiry and remark by the Conservator whenever he inspects.

126. The existing scale of grazing fees, viz.

Buffaloes	1	0	0	per head.
Cow	0	8	0	,,
Sheep	0	4	0	,,

for grazing in the Thadagam and Bolampatty Block III reserves, and the enhanced rate of :—

Buffaloes	2	0	0	per head.
Cow	1	0	0	,,
Sheep	0	8	0	,,

for grazing in the Anaikatty reserves will be maintained.

It should be noted here that in the dry season there is little water in the Thadagam reserve with the result that the graziers are compelled to take their cattle for three or four months in the year, to either the Anaikatty reserves or to the private

forests of the Muppil Nair. It will therefore be equitable if cattle covered by permits for Thadagam reserve be allowed to graze in the Anaikatty reserves also on payment of the difference in rates. This will be permitted.

127. Penning of cows, but not buffaloes and sheep, within the forest in the localities approved by the District Forest Officer, will be allowed between 1st July and 31st December in all cases except those included in the Coppice Working Circle. The fee to be paid for penning will be Rs. 2-8-0 per 100 cattle or less.

128. The concession of free grazing for 'necessary' cattle in the Anaikatty reserves to the Irulars of the plateau will be continued, subject to the condition that they protect the reserved forests against fire. This condition, which is believed to have been ignored, is to be rigorously enforced, the control record is to contain special reference to the Anaikatty reserves in respect of fires with a statement as to whether fees have been imposed if there has been fire, and, if fees have not been imposed in such a case, justification is to be given. At the beginning of the grazing season, the District Forest Officer will issue the free grazing permits equitably to the Irulars through their headmen. At the same time the Irulars should be made to understand that any abuse of this concession will entail the cancellation of their free permits. Very often, the Irulars, who are generally entrusted with cattle from the plains during the hot weather, pass off such cattle as their own: this should be put a stop to. The Range subordinates should frequently inspect the Irular settlements and satisfy themselves that the free permits are used only for bona fide Irular cattle.

129. *Control.*—Record of the number of cattle for which permits were issued during the year and the revenue obtained thereon will be entered in the control book. Special mention should be made regarding the number of cattle for which free grazing permits were issued during the year, at the same time recording therein whether the Irulars successfully protected the reserves of Anaikatty from fire.

CHAPTER VII.--MISCELLANEOUS REGULATIONS.

Section 1.--Fire protection.

130. The existing system of fire tracing the portion of the district boundary between Malabar and Coimbatore from Idingivarai to Perumalmudy will be continued. No special fire protective measures are prescribed for the rest of the forest as the cost would be high, and other means of securing immunity must be sought. Felled over coupes are subject to fire: this is a serious matter to which unremitting attention must be paid.

Burnt areas should be closed to grass cutting and grazing for not less than two years subject to the rules in force. Action must be prompt and should it be considered inadvisable to take this action, the facts in respect of the fires and the reasons for refraining from the imposition of closure should be at once reported to the Chief Conservator.

The boundaries of areas so closed should follow easily identifiable natural features.

Section 2.—Roads.

131. The chief export road for transport of the produce from Thadagam and Anaikatty reserves to Coimbatore, is the Coimbatore-Anaikatty road. About ten miles of this from Coimbatore to near Chinnathadagam, is metalled and it is maintained by the District Board. Three miles of this road from Chinnathadagam to Mankarai are in a bad state and need reformation. It is understood that the people of Chinnathadagam are agitating to have this road maintained by the District Board and that an estimate for Rs. 6,000 has been prepared, to put this section of the road in order.

132. The portion of the road from Mankarai to Anaikatty is in a very bad state of repair. In the past there has been a great deal of correspondence between the Collector and the owners of the Attapady estates and the Muppil Nair regarding the maintenance of this road, but no settlement has been arrived at. There is at present a track, passable for bullock carts but in many places the road is either so steep, bouldery or cut up, that a full cart load of material cannot be safely transported. We are concerned only with four miles of this road from Mankarai: it is desirable to

keep it always fit for transporting a full cartload of fuel from the coupes. If the road is improved the coupes will be sold at better prices. Hence it is prescribed that four miles of this road referred to above shall be improved by making slight realignments wherever necessary, excavating side drains and sectioning. It is estimated that a sum of Rs. 2,000 will be required for this purpose.

133. The existing coupe road to Mankarai Felling Series should be extended up to Semakarai over a distance of 2½ miles and the cost of construction is estimated to be Rs. 1,000.

134. Another coupe road from the place where the present one crosses the Thannirpallam will skirt the Dumanur hill 3387, follow contour 2500, will cross the Thadagam Anaikatty boundary and pass into the Anaikatty series, ending at the northern boundary of the next ten coupes. This road will facilitate transport of fuel from four coupes of Mankarai and about six coupes of Anaikatty. The length may not be more than three miles and a sum of Rs. 1,500 may be required for this.

135. A sum of Rs. 400 will be provided for constructing a road more or less along the southern boundary of Bolampatty Block III from near Thuppepalayam, leading to the Ichikuly fuel coupes.

136. There will be in all about 12 miles of roads to be maintained and the sum provided for this will be Rs. 600 a year.

SECTION 3.—IMPROVEMENT OF WATER-SUPPLY.

137. There is scarcity for water for the cattle in the working plan area and with the object of improving the existing springs a sum of Rs. 100 will be provided annually. The more frequently used springs should be improved by cleaning them periodically, cutting over hanging and surrounding growths, etc. Where springs dry up during the hot weather, the possibility of sinking wells to maintain the water-supply should be investigated.

SECTION 4.—BUILDINGS.

138. The subordinates stationed at Thadagam are not provided with Government quarters and they are obliged to stay at present in private rented houses, which is not very desirable. It is prescribed that a Forester's quarters costing not more than Rs. 1,200 and a Forest Guards line of three sets of rooms costing not more than Rs. 1,800 shall be constructed at or near Chinnathadagam.

139. The Mankarai rest-house will be maintained at a cost of Rs. 50 annually.

SECTION 5.—BOUNDARIES.

140. The reserve boundary lines shall be maintained in accordance with instructions contained in the Forest Manual under 'Rules for the demarcation of forest blocks'. The total length of the boundary of the reserves dealt with under this plan is about 60 miles of which 25 miles more especially adjoining patta lands or private forests need attention.

141. Initially some expense, about Rs. 400, would be required to set right the boundaries now found defective and later on the beat subordinates should be made responsible for their proper maintenance. The initial work will consist of clearing the boundary lines to their proper width and reconstructing the cairns to their proper dimensions and constructing fresh ones wherever necessary.

142. At the end of the year the Forester in charge should report to the Range Officer on the state of the boundaries in his section; the latter will submit a consolidated report to the District Forest Officer.

143. Coupe stones showing the number of the coupe and the year of working will be planted at the corners of coupes.

SECTION 6.—SANDAL PROPAGATION CENTRES.

144. Much of the tract dealt with under this plan appears suitable for introduction of sandal. Dibbling of about 15 measures of sandal seeds was done in the Anaikatty South reserve over one acre adjoining Samakara and about 20 seedlings about 15 feet high and 10 inches girth exist. It is therefore prescribed that sandal shall

be raised in favourable localities in the working plan area with the object of propagating this species. The following points should be observed in the choice of plots and their treatment.

145. Plots not more than half an acre in extent should be chosen, as far as possible, in fairly moist localities with a fair amount of tree growth on them, for example, near Melmudy Rangaswami Koil, on the path to Perumalmudi at the first stream crossing, near Nava Kinar, near Samakara, near Anaikatty, near Thuve, etc.

146. Three plots, one in each beat of Thadagam section will be selected every year.

147. The plots will be strongly fenced with brushwood and twigs, immediately after germination of the seed is assured, and closed to grazing, till the sandal plants grow beyond the reach of cattle.

148. Suitable host plants will be chosen and sandal seeds dibbled at stakes under bushes. Seeds should be dibbled close to some bush or shrub suitable as host but not nearer than ten feet from any tree species. Some of the more common host plants are *Zizyphus spp.*, *Anogeissus latifolia*, Vengai (*Pterocarpus Marsupium*), *Albizzias*, *Acacias*, *Ficus*, *Bamboos*, etc. Dibbling should be done in April.

149. The beat subordinates will be personally responsible to see that the stakes are maintained till the plants are established. The sandal seedlings in the early stages being very delicate should not be exposed. When they get established they should be gradually opened out giving enough overhead light. Care should be taken to see that hosts are not destroyed.

The plots should be rigidly protected against fires, by fire lines all round.

Selected plots will be serially numbered and a register will be maintained showing under each plot its situation, short description of growth, details as to how and when sown and further useful records regarding development.

150. The range officer should personally choose these plots, and maintain the register and the District Forest Officer will himself make an edited entry therefrom every year in the Control Journal.

151. A sum of Rs. 10 per plot is provided for raising and maintaining these sandal centres.

152. The propagation centres should be roughly indicated on the working plan map, when raised.

CHAPTER VIII.—ESTABLISHMENT AND LABOUR.

153. The existing establishment will suffice to carry out the prescriptions of this plan.

154. There is plenty of labour among the Irulars on the plateau for carrying out the works prescribed under this plan.

CHAPTER IX—FINANCIAL FORECAST AND COST OF THE WORKING PLAN.

SECTION 1—FINANCIAL FORECAST.

155. Anticipated revenue for the next ten years is :—

	RS.
1. Sale of Mankarai fuel coupes, 1,090 acres in all at an average price of Rs. 20 per acre. It should be noted that improved facilities for transport of produce will result in better prices for the fuel coupes.	21,800
2. Sale of Anaikatty fuel coupes, about 820 acres at Rs. 15 per acre ...	12,300
3. Sale of Ichikuly fuel coupes, 400 acres at Rs. 8 per acre	3,200
4. Sale of bamboo coupe thrice during the working plan period at Rs. 250 each time.	750
5. Lease of minor forest produce annually. A portion of the revenue for whole range is reckoned. About Rs. 300 annually.	3,000
6. Grazing revenue at Rs. 2,000 per annum	20,000
7. Miscellaneous including tree value collected by Revenue Department.	2,500
Total revenue for 10 years ...	63,550

156. Anticipated expenditure during the next ten years :—

		RS.
1.	Establishment including a portion of the cost of district establishment.	40,000
2.	Improvements to Mungilpallam road, Rs. 2,000 to be spread over 30 years.	700
3.	Cost of constructing new roads for working the coupes of next ten years only.	2,900
4.	Cost of maintenance of 12 miles of road at Rs. 50 per mile per year.	6,000
5.	Cost of constructing subordinates quarters at Chinnathadagam, Rs. 3,000 to be distributed over 30 years.	1,000
6.	Repairs to existing buildings at Rs. 75 a year	750
7.	Cleaning over 1,980 acres of fuel coupes at Re. 1 per acre... ...	1,980
8.	Raising centres for sandal propagation, 30 centres at Rs. 10 each...	300
9.	Fire protection at Rs. 120 per year	1,200
10.	Miscellaneous	490
	Total expenditure for ten years ...	55,320

157. The net profit during the next ten years will be Rs. 63,550 minus Rs. 55,320, i.e., Rs. 8,230 or an annual net profit of Rs. 823.

Section 2.—Cost of the Working Plan.

158. The following is roughly the amount debitable to the cost of this working plan :—

		RS.
(a)	Pay of one Extra Assistant Conservator of Forests at Rs. 425 per mensem for three months.	1,275
(b)	Pay of one peon for three months at Rs. 12 per mensem ...	36
(c)	Travelling allowance for two, three months	500
(d)	Contingencies	30
	Total ...	1,841

CHAPTER X—SUMMARY OF PRESCRIPTIONS.

	Paragraphs
The area is divided into five working circles	85
The plan will be current for ten years from 1st January 1930 ...	86
Need for intermediate revision is not anticipated	87
For coupe working and for control, calendar year is adopted ...	88
I. Coppice Working Circle.	
Area 7,085 acres, it is divided into three felling series	89
The Mankarai felling series described	90
The Anaikatty felling series described	91
The Ichikuly felling series described...	92
The Veerapandy felling series under the previous plan will be closed—the area worked over in the past is given	93 and 94
The working circle is not divided into compartments, each of the four reserves forms a block...	95
Enumeration or valuation surveys not carried out; estimate of out-turn is based on the past actuals and ocular estimates	96
The Sylvicultural system will be 'simple coppice'	97
The rotation is 30 years	98
Annual coupes are allotted for ten years	99
Yield—estimated on the area basis	100
One coupe in each felling series will be auctioned annually for coppice felling. Coupe lines six feet wide will be cut and coupe stones will be planted	101
Fellings will proceed by strips, commencing at the top of a slope and proceeding downwards	102 and 103
Unsold coupes will be sold as arrear coupes in the subsequent years	104
Tabular statement of coppice fellings	105
Tabular statement of cleanings	106
Coupe X of each series will be cleaned in 1940	107
Instructions for cleaning are given	108
Control forms have been prescribed	109

Paragraphs.

The District Forest Officer is responsible for the proper maintenance of control records ... 110
Sample entries of control forms are given in Appendix III ... 111
The Control Book ... 112
The Record of Works ... 113
The Control of Journal ... 114
Posting of arrear areas in the Control Book—instructions ... 115
No indicator areas to be felled; but the District Forest Officer should inspect the coupes prior to sale ... 116

II. The Protection Working Circle.

Includes all areas except those under the Coppice and Bamboo Working Circles ... 117
Not divided into compartments, but only into blocks ... 118
The area will be given complete rest, but will be open to grazing and collection of Minor Forest Produce ... 119

III. The Bamboo Working Circle.

Area about 1,680 acres. The whole area will form a single coupe and will be leased out every third year ... 120
Control Book prescribed ... 121

IV. The Minor Produce Working Circle.

The lease for collection of Minor Forest Produce will be for the entire range, and one-third of the revenue will be apportioned to the Working Plan area ... 122
Control Book prescribed ... 123

V. The Grazing Working Circle.

Covers the entire Working Plan are a excepting all the coupes worked over in the past ... 124
The existing Government order, which contemplates unlimited and unrestricted grazing, is mentioned ... 125
The possibility for each reserve should be applied when the present policy is modified ... 125
Steep slopes when subject to grazing and trampling should be closed to grazing ... 125
The ordinary and enhanced rates of grazing fee that will be charged are quoted ... 126
Penning of cows only is allowed at Rs. 2–8–0 per 100 or less ... 127
Free grazing of the Irular cattle in the Anaikatty reserves will be permitted, and free permits issued, to a limited number and under certain conditions ... 128
Control form prescribed ... 129

VI. Miscellaneous regulations.

Portion of Malabar-Coimbatore district boundary to be fire traced. 130
Burnt areas to be closed to grass cutting and grazing for two years. 130
Reforming of Chinnathadagam-Mankarai road by the District Board is mentioned ... 131
Four miles of Mankarai-Anaikatty road to be improved ... 132
The Mankarai coupe road should be extended by $2\frac{1}{2}$ miles ... 133
A coupe road of three miles to serve Mankarai and Anaikatty series should be constructed ... 134
A road from near Thuppepalayam to Ichikuly coupes should be constructed ... 135
The roads, which will be about 12 miles in all, should be maintained ... 136
A small amount (Rs. 100) will be spent annually for improving the existing springs in the Working Plan area ... 137
The possibility of sinking wells to maintain the water-supply should be investigated ... 137
A Forester's quarters and a line for three Forest Guards should be constructed at Chinnathadagam ... 138
The Mankarai rest-house should be maintained ... 139
The reserve boundary, about 60 miles, should be maintained ... 140
The boundaries should be set right by clearing the lines to the proper width and by renewing and building cairns ... 141

	Paragraphs.
The state of boundaries to be reported to the District Forest Officer at the end of every year	142
Coupe stones should be planted at the corners	143
Sandal should be raised in favourable localities	144
Plots not more than half an acre should be taken up	145
Three plots, one in each beat of Thadagam section, will be dealt with every year	146
The plots should be strongly fenced and closed to grazing ...	147
Sandal seeds should be dibbled, in April, close to suitable host plants, but not nearer than ten feet from any tree species ...	148
The beat subordinates to be responsible for seeing that the sandal regeneration is successful	148
The plots should be rigidly fire-protected by fire lines all round ...	149
Plots will be serially numbered and a regeneration register maintained	149
The Ranger to choose the plots personally and maintain the register from which the District Forest Officer will make an edited entry in his yearly control journal	150
A sum of Rs. 10 per plot is provided for the raising and maintenance of sandal	151
The sandal centres should be marked on the Working Plan map ...	152

VII. Establishment and Labour.

No increase in the existing establishment is proposed	153
There is plenty of labour	154

VIII. Financial Forecast.

Anticipated revenue for the next ten years	155
Anticipated expenditure for the next ten years	156
Profit on the working	157
Cost of preparing the Working Plan	158

APPENDIX I.

Rights and Concessions.

Thadagam Reserve.

1. Right of way for the villagers of Thadagam Valley to the temple of Anubavi Subramania temple situated about half a mile within the reserve to the south of field No. 176 of Peria Thadagam. The right is exercisable daily. No cooking can be carried on at the temple except in the place selected for that purpose by the District Forest Officer. The villagers of Peria Thadagam are also permitted to draw water from the spring for domestic use.

2. Right of way is admitted in favour of the public at Karuparayan koil situated about two furlongs within the reserve near the village of Pannimadai. The right is exercisable by the inhabitants of the neighbouring villages on Tuesdays and Fridays throughout the year. The right is subject to the restriction that no cooking be performed on the path within the reserve limits.

3. Right of way is granted to Ponnuthamman koil. The koil consists of a cave and is about one mile within the reserve. The right is exercisable throughout the year by all villagers near Karalpalayam and is subject to the restriction that no fire be kindled on the path except at the place selected for the purpose by the District Forest Officer.

4. Right of way is given to the people of Ravuttakollanur and neighbouring villages to the temple of Melmudi Rangayyan Perumal koil on the kuridi hill range subject to the restrictions noted below.

The right is ordinarily exercisable on Saturdays only but daily throughout the month of Peratasi (September-October). No fire is to be kindled for cooking or for any other purposes save in the places selected by the District Forest Officer. These will either be at Massagoundan's well, two miles to the east of the temple, or by the spring at the temple itself.

5. The Irulars residing in the undermentioned ten hamlets of Anaikatty village, viz., Basavankulipathy, Kandivalipathy, Kondanur, Jembugundy, Tuvai, Sembakarai, Dumanur, Suttur, Sanapalli and Erukilampathy will be permitted to collect minor produce such as gall nuts, horns, bees wax and honey within the Thadagam reserve throughout the year for sale or barter only to the District Forest Officer, or his nominee the Government Forest contractor.

6. A right of way for men, cattle and carts from Mankarai to Mungilpallam.

Bolampatty Block III.

1. The claim to right of way to the Marudamalai temple is admitted. The route to be used is the one now used proceeding east from the temple to the foot of the hill built with steps in parts. Fires and cooking are permissible at the chavadi near the temple. The path may be used on any day in the year. Right to the use of the temple well is also given.

2. The claim of the caste peoples of the villages of Devarayapuram, Vellaragampalayam, Kuppapalayam and Valiapalayam to the right of way to the Perumal koil about a quarter of a mile inside the reserve, and to the right to use the well of the temple for watering their cattle is admitted subject to the following restrictions :—

A thousand cattle may be watered there if sufficient water is available.

No fires for cooking or other purposes are to be kindled at the temple.

3. The claim to the right of way to the Malabar district is admitted to the villagers of Devarayapuram, Parameswarenpalayam, Thondamuthur, Vellarangampalayam and Kuppapalayam and to their cattle.

The right will ordinarily be exercised in the months of March, April and May, but may be exercised in other months if pasturage is sufficient on this side. About one thousand heads of cattle are permitted to use this path during the year. The cattle are not to remain in the reserve without the permission of the Forest Officer but to go, according to the present custom straight over the hill into the Malabar country in one day ; the same condition holds good on their return, since the cattle are accustomed to remain in Malabar for weeks together without returning to this side.

Anaikatty North.

1. Irulars of Kondanur are permitted to collect with permit of the District Forest Officer to cut to an extent of 50 headloads of grass for each house.

2. The right to gather edible roots is granted to the Irulars throughout the year on previous permission being obtained during the month of June from the District Forest Officer. This permission will be granted if they protect the forests from fire in the previous season.

3. Right of collecting minor produce is granted to the Irulars on condition that they hand over such minor produce to the District Forest Officer or his authorized subordinate or agent, or contractor on payment for the collection. They must go into the reserved forest with a permit for the purpose obtained from the District Forest Officer or his authorized subordinate agent or contractor.

4. The Mariamman temple with a space one chain square including the temple-site will be excluded from reservation and kept as an enclosure and right of worship allowed.

5. A pathway ten yards wide for people and cattle will be allowed from the Kondanur-Panapalli, path to the trijunction stone of Gopanari and Anaikatty villages on the Thadagam reserved forest boundary. The latter boundary line will be used as a path to Tholampalayam as at present. The pathway allowed is subject to the condition that no fire should be kindled along any portion of the path and that the cattle are allowed only to pass through the path and not to remain on the hill without permits having been taken from the District Forest Officer.

6. A pathway ten yards wide will be allowed for people and cattle from Panapalli to Jembugundy.

7. Right to use the water of well near south of survey No. 5 by people and cattle is admitted.

8. A path of ten yards wide will be allowed for people and cattle to Panapalli from Kondanur, etc., places.

Anaikatty South.

1. Path for men and cattle from Semakara to Gangal runs along the reserve boundary for some distance. This is admitted.

2. A pathway ten yards wide will be allowed for people and cattle from Dumanur to Thuvai and another from Thuvai to Thadagam.

3. A pathway ten yards wide will be allowed for people and cattle from Dumanur to Karattiamman temple thence to the Mugilpallam-Anaikatty track.

4. Right of collecting minor produce is granted to the Irulars on condition that they hand over such minor produce to the District Forest Officer or his authorized subordinate agent or contractor on payment for the collection. They must go into the reserve forest with a permit for the purpose obtained from the District Forest Officer.

5. Right to gather edible roots throughout the year by Irulars is recognized.

6. The Karattiamman temple with a space one square chain including the temple-site will be excluded from reservation and kept as an enclosure and right of worship allowed.

7. A pathway ten yards wide for people and cattle will be allowed from Dumanur to Vellakulam.

8. A concession extented to the Irulars of the plateau to graze their 144 cattle and also such additional cattle as may, from time to time, be determined by the Revenue Divisional Officer to be needed for agricultural purposes, free in the Anaikatty North and South reserves provided they protect the forests from fire.

APPENDIX II.

List of species occurring in the Working Plan area.

Timber species.

Botanical name.	Vernacular name, (Tamil).
1. Chloroxylon Swietenia.	Vella porasu.
2. Albizzia Lebbek ...	Vagai.
3. Tamarindus Indica.	Puli.
4. Dalbergia latifolia.	Itti.
5. Adina cordifolia ...	Manjakadambe.
6. Sapindus emarginatus.	Puchai.
7. Melia indica ...	Vembu.
8. Pterocarpus Marsupium.	Vengai.
9. Anogeissus latifolia.	Vella nagam.
10. Albizzia odoratissima.	Karuvagai.
11. Grewia tiliæ folia ...	Thadachy.
12. Tectona grandis ...	Theku.

Fuel Species.

Botanical name.	Vernacular name, (Tamil).
1. Albizzia amara ...	Woonajal.
2. Phyllanthus emblica.	Nelli.
3. Acacia sundra ...	Karungali.
4. Ixora parviflora ...	Payirai.
5. Zizyphus trinervia.	Karikatan.
6. Strychnos potatorum.	Thethan.
7. Cassia fistula ...	Sara konne.
8. Cleistanthus collinus.	Odugu.
9. Mimusops hexandra	Kanupalai.
10. Strychnos nux-vomica.	Yetti.
11. Pongamia glabra ...	Pongam.
12. Bauhinia racemosa.	Athi.
13. Atalantia monophylla.	Kat elimichan.
14. Dichrostachys cineria.	Vadathelan.
15. Prosopis spicigera.	Vanni.
16. Cordia Myxa ...	Virian.
17. Cordia Rothii ...	Nari virian.
18. Randia dumetorum.	Karai.
19. Zizyphus jujuba ...	Elanthai.
20. Ficus tsiela ...	Ichi.
21. Stereospermum chelenoides.	Padri.
22. Acacia leucophlœa.	Vel velan.
23. Wrightia tinctoria.	Veppalai.
24. Diospyros montania.	Vakkanai.
25. Erythroxylan monogynum.	Chempulichan.
26. Holoptelia integrifolia.	Aya.
27. Stereospermum xylocarpum.	Vedankoranai.
28. Premna tomentosa.	Podanganari.
29. Morinda citrifolia.	Nona.
30. Terminalia Arjuna.	Neermarudu.
31. Bassia latifolia ...	Illupai.
32. Buchanania latifolia.	...
33. Terminalia chebula.	Kadukai.
34. Terminalia belerica.	Thani.
35. Bridelia retusa ...	Mulvengai.
36. Odinia wodier ...	Annakarai.
37. Grruga pinnata ...	Karuvembu.
38. Spondias mangifera.	Kattuma.
39. Butea frondosa ...	Palasu.
40. Acacia suma ...	Chalawoonjai.
41. Mallotus spp. ...	...
42. Wrightia tomentosa.	Palai.
43. Holarrhena antidysentrica.	...
44. Canthium didymum.	Nakkani.

Soft woods.

Botanical name.	Vernacular name, (Tamil).
1. Gyrocarpus americana.	Tanaku.
2. Mundelia Suberosa.	Vellaiporasu.
3. Protium caudatum.	Malam kiluvai.
4. Givotia rottleriformis.	Vellaibhoothalai.
5. Bombax malabaricum.	Poolai.
6. Sterculia spp. ...	...
7. Cochlospermum Gossypium.	Kattu Panchu.
8. Dalbergia paniculata.	...

Shrubs.

Botanical name.	Vernacular name, (Tamil).
1. Dodonea viscosa ...	Virali.
2. Webera corymbosa.	Pappatan.
3. Solanum pubescens.	Chundakkai.
4. Euphorbia antiguorum.	Tirukkalli.
5. Opuntia dillenii ...	Pattanakkalli.
6. Cassia auriculata ...	Avaram.
7. Cassia tora ...	Tokarai.
8. Cassia sophora ...	Poonavarai.
9. Strobilanthes spp.	Kurinji.
10. Helicteres isora ...	Valambiri.
11. Limonia acidissima.	Kattu narakam.
12. Toddalia aculeata.	...
13. Strebles asper ...	...
14. Morrayya exotica ...	...
15. Glycosmis pentaphylla.	...
16. Ehretia buxifolia ...	...
17. Canthium parviflorum.	...
18. Gmelina asiatica ...	...
19. Carrisa spinarum ...	...

Climbers.

Botanical name.	Vernacular name, (Tamil).
1. Acacia pinnatta ...	Indushagai.
2. Cæsalpina sepiaria.	Vellai Indi.
3. Acacia Intsia ...	Kaarindu.
4. Pterolobium indicum.	Serindu.
5. Jasminum spp. ...	...
6. Celastrus paniculata.	...
7. Hiptage madablotha.	...

APPENDIX III.

Control Forms.

Control Book.

Coppice Working Circle.

Prescriptions of working plan.					Result of operations.							
	Locality to be exploited.					Loaclity exploited.						
Year.	Block and compart-ment.	Coupe.	Area.	Nature of work.	Year.	Block and compart-ment.	Coupe.	Area.	Work done.	Yield.	Selling price.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1930 ..	Thada-gam.	I	ACS. 110·00	Simple coppice.	1930	Thada-gam.	I	ACS. 110·00	Clear felled for coppice	Small timber— CUBIC FEET. Vengai post .. 20; Vagai .. 16; Ploughs. 20; 56. Fuel 70,400 cubic feet stacked. Headloads 40.	Rs. 22 per acre. Total Rs. 2,420.	Before the coupe was auctioned it was inspected by me and I estimate the outturn to be on an average of nine tons per acre.

Record of works.

Coppice Working Circle.

Prescriptions of working plan.					Result of operations.						
Year.	Block and compart-ment.	Coupe.	Area.	Nature of work.	Year.	Block and compart-ment.	Coupe.	Area.	Work done.	Cost.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. Measures prescribed.											
1930 ..	Thada-gam.	II	ACS. 110·00	Cleaning ..	1930 ..	Thada-gam.	II	ACS. 110·00	Cleaning and climber cutting.	RS. A. P. 110 0 0	Thorny climbers were plentiful on the north-eastern third of the coupe.
B. Measures suggested.											
							Nil				
C. Measures neither prescribed nor suggested but carried out											
					1935.	Thada-gam.	II	110.00	Second cleaning ..	96 0 0	On inspection it was found that a second cleaning was necessary; so it was done.
					1935.	Do.	V part.	10·00	Sowing broadcast seeds of Vepam, Tamarind, etc.	12 8 0	

Control Book.

Bamboo working circle.

Prescription of working plan		Result of operations.				
Year.	Coupe.	Year.	Coupe.	Yield.	Price.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1930	Anaikatty South part .. Bamboo coupe	1930	Bamboo coupe in Anaikatty South reserved forest.	Hollow bamboos 60 cart loads. Solid bamboos 10 cart loads. Split bamboos 12 cart loads. Thorns 8 cart loads.	RS. 970	

Control Book.

Minor produce Working Circle.

Year. (1)	Kinds and quantities of minor produce collected in the whole Range. (2)	Total revenue for Range. (3)	One-third total revenue and quantity allotted to working plan area. (4)	Remarks. (5)
		RS.		
1930	Shekoy 8 bags .. .. Honey 12 tins .. .. Wax 110 lbs. .. .. Galnuts 4 bags	990	Revenue— Rs. 330 0 0. Quantity— Shekoy $2\frac{2}{3}$ bags. Honey 4 tins. Wax $36\frac{2}{3}$ lbs. Galnuts $1\frac{1}{3}$ bags	

Control Book.

Grazing Working Circle.

Year. Number of permits issued for each species of animals.	Revenue realized. RS.	A.
1930—		
Ordinary rate—		
Buffaloes 120 at rupee one	120	0
Cows 1,800 at eight annas	900	0
Sheep 200 at four annas	50	0
Difference of rate for Anaikatty—		
Buffaloes 60 at rupee one	60	0
Cows 800 at eight annas	400	0
Sheep 50 at four annas	12	8
Enhanced rate for Anaikatty—		
Buffaloes 30 at rupees two	60	0
Cows 200 at rupee one	200	0
Sheep 40 at eight annas	20	0
Total ...	1,822	8

Free grazing permits to Irulars on the plateau were issued to the following extent—

Cows	100
Sheep	80

Proceedings of the Chief Conservator of Forests

Proceedings No. 294, Press, 22nd July 1931

Working Plan—Thadagam Valley and Bolampatti Block III Forests—Sanctioned.

R. D. Richmond, Esq., I.F.S.,
Chief Conservator of Forests.

Read—the following papers :—

I

Letter from A. Wimbush, Esq., I.F.S., Conservator of Forests, Sixth Circle, to the Chief Conservator of Forests, Madras, dated Ootacamund, the 19th September 1930, Ref. No. T. 2308/29.

I send herewith for sanction the revised working plan for the Thadagam Valley and Bolampatti Block III Forests prepared by Mr. M. H. Krishnaswami, Extra Assistant Conservator of Forests. A map, 2 inches to 1 mile, on tracing cloth, accompanies the working plan.

2. The Working Plans Conservator has scrutinized the working plan and has agreed with the prescriptions which were amended in a few instances according to his suggestions.

Work is being carried out according to this plan with effect from 1930.

3. Since the plan was forwarded originally by the Collector of Coimbatore, an alteration was made in the plan by changing the period of closure to grazing from 5 years to 10. In his No. 10646/30-B-5, dated 1st September 1930, the Collector has agreed to this change.

4. Mr. Krishnaswami spent two months on the field work of the plan. Had he been attached to the Working Plans Circle instead of to the Sixth Circle at the time he would, automatically, have received a working plan allowance of Rs. 50 per mensem. I recommend that sanction be obtained for paying him a working plan allowance of Rs. 100.

5. The working plan should be printed and bound as usual but the map need not be printed as manuscript copies are available and will be used by the officers concerned.

6. Two typed copies of the working plan are being sent to the District Forest Officer, Palghat, for his own use and that of his ranger.

II

Reference from the Chief Conservator of Forests, No. 8521/30-C-2, dated 6th October 1930.

R. D. Richmond, Esq., I.F.S.,
Chief Conservator of Forests.

Read—the following paper :—

From the Conservator of Forests, Sixth Circle, Ootacamund, Ref. No. T. 2308/29, dated 19th September 1930.

Reference—No. 8521/30-*C*-2, *dated* 6*th October* 1930.

Government have said quite definitely that they will not limit grazing, or raise the fees to the same end, but that where grazing is undesirable it should be prohibited altogether. The plan must take due account of these orders—if it is thought desirable areas might be opened in rotation.

2. It is felt that insufficient has been done in the past to improve the condition of these much degraded forests—the water level and the liability of the streams to sudden and heavy flooding show that the proper functions of a forest are not being performed. The plan does not draw sufficient attention to this. B.P. No. 32, Forest, dated 7th March 1917 should be seen. It is doubtful if there has been any improvement since that time. Perhaps nothing can be done, but the facts must be stated.

It is a question of grazing and fire. The grazing proposals require re-examination and it must be prescribed that burnt areas are closed, and immediately, to grazing for two years, to allow of recuperation.

3. Rupees 2 per acre seems a high figure for the tending of coppice in this class of forest.

4. The estimate of revenue from fellings seems high when compared with actuals. It is not apparent that anything like Rs. 20 per acre has ever been obtained.

5. The summary of prescriptions must be rewritten. It is inaccurate and in any case, more like an index than a summary.

R. D. RICHMOND,
Chief Conservator of Forests.

To the Conservator of Forests, Sixth Circle, Ootacamund.

III

Letter from A. WIMBUSH, Esq., I.F.S., Conservator of Forests, Sixth Circle, to the Chief Conservator of Forests, dated Ootacamund, the 6th November 1930, Ref. No. T. 2308/29.

[*Reference.*—Your Ref. No. 8521/30-C-2, dated 6th October 1930.]

I have given much thought as to how to give effect to your orders about the Thadagam Working Plan. The author is no longer in this circle; so I must send the plan to the District Forest Officer, Palghat.

2. *Your paragraph* 1.—As the working plan says, it is obvious both from statistics and field observations that these forests have been excessively grazed in the past. Take Bolampatti Block III which we both know as the rather bare hill range separating Bolampatti Valley from Thadagam Valley. The grazing incidence is said to be 2,981 cow units and the possibility 1,580 units. Will you please tell me whether your paragraph 1 means that you want that whole spur to be closed for, say, three years and then opened for one year. It hardly seems feasible to devide up a spur like that into open areas and closed areas. I simply mention this big spur as a sort of typical subdivision of the working plan area which we both know by sight. It is to be presumed that to close it to grazing would cause great inconvenience and a corresponding outcry from the villagers.

3. *Your paragraph* 2.—Paragraphs 37 to 40 of the working plan make it clear that fire and grazing are serious dangers. Paragraphs 11 to 13 talk about the water-supply, sudden floods and very low water level.

The whole of paragraph 125 which mentions the present Government policy and then lays down the possibility of the reserves which, nowadays, is of little value, can easily be cut out and be replaced by a prescription to the effect that areas burnt are to be closed to grazing immediately for two years, to allow of recuperation. Would this meet the case?

4. *Your paragraph* 3.—The working plan talks about the prevalence of thorny climbers but Rs. 2 can be changed to Re. 1 arbitrarily if you think it desirable. It has, however, to be remembered that tending of the coppice is one of the very few ways in which it is possible to effect any improvement. I request orders.

5. *Your paragraph* 4.—I had the whole financial forecast re-examined and revised before I sent you the working plan because I thought it too optimistic. Rupees 20 per acre was adopted for the Mangarai Felling Series because the rates per acre obtained for coupes in this series in recent years were as follows :—

	RS.
1928-29	20 per acre.
1929-30	25 do.
1930-31	20 do.

I request orders as to the rate which you wish to be entered for each felling series. For the Anaikatty Felling Series the author had no actuals to go upon because we had not worked the area before. The same appears to apply to the Ichikuly Felling Series. Mr. Krishnaswami anticipated that the road work prescribed would affect prices favourably.

6. *Your paragraph* 5.—Can you please refer me for my guidance to some working plan in which the summary of prescriptions is drawn up in the way that you desire? Realizing the unsuitability of some summaries, I had this one drawn up on the lines of that in the Nilambur revised working plan which seemed to me to be as good a model as I have seen. The actual inaccuracies which you refer to will be searched for.

IV

Reference from the Chief Conservator of Forests, No. 8521-C-2/30-2, dated 21st November 1930.

R. D. RICHMOND, Esq., I.F.S.,

Chief Conservator of Forests.

Thadagam Working Plans map.—The Conservator, VI Circle, is informed that it will be better to use original copies of Survey of India 2-inch maps, rather than tracing cloth.

R. D. RICHMOND,
Chief Conservator of Forests.

To the Conservator of Forests, VI Circle.

V

Reference from the Chief Conservator of Forests, No. 8521/30-C-1, dated 15th April 1931.

R. D. RICHMOND, Esq., I.F.S.,

Chief Conservator of Forests.

Read—the following papers :—

Reference from the Conservator of Forests, Sixth Circle, T. No. 2308/29, dated 19th September 1930.

Reference from the Conservator of Forests, Sixth Circle, T. No. 2308/29, dated 6th November 1930.

Reference—No. 8521/30-C-1, *dated* 15*th April* 1931.

The original copy of the revised working plan for the Thadagam valley and Bolampatti Block III forests is returned to the Conservator, Sixth Circle, and he is requested to rewrite the relevant paragraphs with reference to the following instructions.

2. *Paragraph* 108 *of the working plan.*—At the end of this paragraph, *add* :—

"This cleaning should not cost more than Re. 1 per acre. Whether the year following felling will be the correct time at which to undertake it, will be a question for the Conservator's decision in 1933."

With reference to this addition, the estimate of anticipated expenditure and the net profit given in paragraph 156 of the working plan should be revised, as well as in other places in which a reference to the Rs. 2 rate is made.

3. *Paragraph* 120 *of the working plan.*—*Put* a full stop after 'only' occurring in the seventh line, *delete* the words 'under the conditions now in force in the district' and *add* the following :—

"In respect of working it suffices to prescribe that no shoot of the year be cut and that not less than five culms be left in any clump."

4. *Paragraph* 124 *of the working plan.*—*For* the existing paragraph, *substitute*—

"The entire working plan area with the exception of all worked over coupes of this plan and of the previous schemes, will be open to grazing."

5. *Paragraph* 125 *of the working plan.*—*Delete* the first sentence of this paragraph and *insert* the following in its place :—

"In their Order Ms. No. 1816, Development, of the 25th October 1929, Government have declined to agree to the limitation of grazing to the possibility of each forest or to raising grazing fees with the same object. And as grazing is permitted in all the forests of a range on a single grazing fee, unlimited and unrestricted grazing must be contemplated."

At the end of the paragraph, *add* the following :—

"It is stated that the steep slopes are not grazed over. Were they subject to grazing and trampling, they should be closed altogether, an action which is permissible under the orders of Government already quoted. This matter must be watched and should be a subject for enquiry and remark by the Conservator whenever he inspects."

6. *Paragraph* 128 *of the working plan.—Insert* the following between the first and second sentences of this paragraph :—

"This condition, which is believed to have been ignored, is to be rigorously enforced, the control record is to contain special reference to the Anaikatty reserves in respect of fires with a statement as to whether fees have been imposed if there has been fire, and, if fees have not been imposed in such a case, justification is to be given."

7. *Paragraph* 130 *of the working plan.—Delete* the words "out of proportion to the possibly beneficial results, and it cannot be justified" at the end of the paragraph and *substitute* the following :—

"high, and other means of securing immunity must be sought. Felled over coupes are subject to fire: this is a serious matter to which unremitting attention must be paid."

Add the following as a sub-paragraph :—

"Burnt areas should be closed to grass cutting and grazing for not less than two years subject to the rules in force. Action must be prompt and, should it be considered inadvisable to take this action, the facts in respect of the fires and the reasons for refraining from the imposition of closure should be at once reported to the Chief Conservator.

The boundaries of areas so closed should follow easily identifiable natural features."

8. *Summary of prescriptions.*—The summary of prescriptions on pages 41 and 42 of the draft working plan will not do. The Conservator is referred to pages 33 to 36 of the Anantapur working plan of 1930, which is on the correct lines, and he is requested to revise the summary of prescriptions of the working plan under reference on those lines.

VI

Letter from A. WIMBUSH, Esq., Conservator of Forests, VI Circle, to the Chief Conservator of Forests, dated Ootacamund, the 24th April 1931, Ref. No. 2308/29.

[Your Ref. No. 8521/C-1-30, dated 15th April 1931—Working plan—Thadagam, etc., reserves—Revision of.]

The draft revised working plan is resubmitted after rewriting the relevant paragraphs in accordance with your instructions.

2. The "summary of prescriptions" has been revised as instructed.

3. The working plan map is also resubmitted.

Proceedings—No. 294, Press, dated 22nd July 1931.

Sanctioned.

2. The Conservator is informed that the working plan, but not the map, will be printed. It is considered sufficient that manuscript copies of the map be provided for the Chief Conservator, Conservator VI Circle, District Forest Officer and Range Officer, and the Conservator is requested to have these prepared and distributed accordingly.

A. WIMBUSH,
Acting Chief Conservator of Forests.

(True copy)

V. G. DARRINGTON,
Personal Assistant.

To the Conservator of Forests, VI Circle. } In manuscript in advance.
" District Forest Officer, Palghat. }

Copy to the other Conservators of Forests.
" other District Forest Officers.
" Principal, Forest College.

TAMIL NADU ARCHIVES LIBRARY
ACC. No.
EGMORE, MADRAS-600 008

SCANNED